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# **The Implications of Universal Enrollment for the DOD Health Care System**

Robert A. Levy • Richard D. Miller

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(U) The TRICARE program is designed to provide for the health care needs of those on active duty, their family members, and retirees and their family members. TRICARE is a complicated health care system with several different parts. One key component is Prime, the managed care portion of the Defense Health Plan (DHP). One must enroll in Prime in order to receive care under it; however, other options for receiving care do not require enrollment. This study responds to tasking from the Under Secretary of Defense (USD) for Personnel and Readiness concerning the feasibility of an enrollment system for the DHP. Under Prime, enrollment is a requirement for receiving care. In a limited sense, enrollment is not only possible but currently under way. We believe, however, that the more important question and one posed under the tasking is whether universal enrollment is feasible. As we'll show, Prime pertains to a relatively important and growing part of the beneficiary population that relies on military treatment facilities (MTF)-military clinics and hospitals-for health care. The other user of the MTFs rely on space-available care. These people don't have to enroll to use military healthcare providers or facilities; they use the NTFs for care when there is sufficient capacity.

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# Summary

## Introduction

The TRICARE program is designed to provide for the health care needs of those on active duty, their family members, and retirees and their family members. TRICARE is a complicated health care system with several different parts. One key component is Prime, the managed care portion of the Defense Health Plan (DHP). One must enroll in Prime to receive care under it; however, other options for receiving care do not require enrollment.

This study responds to tasking from the Under Secretary of Defense (USD) for Personnel and Readiness concerning the feasibility of an enrollment system for the DHP. Under Prime, enrollment is a requirement for receiving care. In a limited sense, enrollment is not only possible but currently under way. We believe, however, that the more important question and one posed under the tasking is whether *universal* enrollment is feasible. As we'll show, Prime pertains to a relatively important and growing part of the beneficiary population that relies on military treatment facilities (MTFs)—military clinics and hospitals—for health care. The other users of the MTFs rely on *space-available* care. These people don't have to enroll to use military health care providers or facilities; they use the MTFs for care when there is sufficient capacity.

In this study, we project what would happen if beneficiaries had to enroll in specific options offered under the Defense Health Plan in order to receive care or reimbursement from DOD. Perhaps the most important implication is that space-available care would no longer be offered. MTFs would not be available to anyone who had not enrolled in Prime.

We recognize that changing the system in this way would have major ramifications to the system as well as to DOD beneficiaries. Most DOD

beneficiaries have options that are not open to others in the civilian health care system. They can stay within the system by joining Prime or they can rely on a mixture of civilian and military care, through the use of TRICARE Standard/Extra and space-available care. Not only would many who rely on the MTF for all or part of their care find their options more limited, but the system might find that too many patients would opt out and rely on nonmilitary facilities and providers. At some point, the number of enrollees left in Prime could be insufficient to support the military's medical readiness goals.

Of course, the lack of enrollment and the reliance on space-available care come with a price. Those who rely on space-available care may find that they cannot get the appointment they want or see the provider they prefer. It means that the goals of the Military Health System (MHS) of providing preventive care and implementing other initiatives to improve the health and productivity of DOD beneficiaries would be limited. It's difficult, if not impossible, to provide these services when patients don't enroll and can move in and out of the system as they please. The uncertainty of which beneficiaries are using what part of the system greatly complicates the managing and planning of future improvements and budgets. Enrollment would alleviate many of these problems.

## Approach

Clearly, a change to a universal enrollment system would not be simple; it represents a major change to the current DHP with many important effects. To explore this issue, we construct a set of enrollment options and determine whether the benefits to the system outweigh the costs that we could quantify—if not the political costs, at least the economic and readiness costs.

As a first step, we defined a set of options that give the beneficiaries certain choices to remain in the system or to leave it. Next, we constructed a series of models, based for the most part on the beneficiaries' own responses to survey questions, that allowed us to project enrollment for each option. We made sure that these models were flexible and could be rerun easily if other assumptions or options were being considered. Finally, for each option studied, we took the

models' projections of enrollment in Prime or their DOD-provided alternative and determined the implications for cost and readiness.

## Findings

We explored three alternatives for increasing enrollment. We chose these options because they are similar to options for the DHP that have been proposed by senior DOD policymakers or members of Congress, although they would tend to reduce enrollment fees, not increase them, as we have assumed. Table 1 presents a summary of who would be affected and how much each option would cost. Option 1 is the most limited and affects only retirees under 65. It would still allow the active duty family members (ADFM) and Medicare-eligible beneficiaries to use space-available care. Only under options 2 and 3 would there be universal enrollment.

Table 1. Options considered in CNA analysis

Plan characteristics	Option 1	Option 2	Option 3
Beneficiary groups affected	Retirees under 65	All but active duty	All but active duty
Prime enrollment to use MTF	Mandatory	Mandatory	Mandatory
Prime enrollment fees	\$150/individual, \$300/ family	\$400/individual, \$800/family	\$400/individual, \$800/family
Changes to Standard/Extra			Substituted by FEHBP
Enrollment fees <sup>a</sup>	\$0 for Standard, \$150/\$300 for Extra	\$650/individual, \$1,350/family	Depends on plan
Benefit design	Some changes to deductibles and copays	Same as today	Depends on plan

a. Under options 2 and 3, active duty family members do not pay an enrollment fee for Prime and are subsidized for any alternative.

Under option 1, Prime enrollment fees would be reduced, but it would cost something to join the network under TRICARE Extra. TRICARE Standard would still have no enrollment and no fee. Option 2 imposes universal enrollment—that is, there is no space-available care. It also imposes higher fees, at least for retirees; ADFMs would not face any enrollment fees, but they must enroll to receive care. Beneficiaries would have to enroll in Standard or Extra (we've assumed they would operate under one plan, analogous to a

managed fee-for-service plan) and would have to pay an enrollment fee. Option 3 retains the enrollment fee structure for Prime and the eligibility for benefits by the over-65 population. However, it replaces TRICARE Standard/Extra with the Federal Employee Health Benefits Program (FEHBP). DOD will pay the premiums (at least up to a set amount) for the ADFM beneficiaries, but retirees will have to pay their share.

Why the increased fees? The main reason is to have beneficiaries commit to a single plan and to reduce the uncertainty of the current system, making it more manageable and predictable. From the beneficiaries' point of view, however, what is perhaps most important is that they would retain their rights to rely on the system when they turn 65. One of the reasons for this analysis is to determine whether our proposed options would make it possible (i.e., affordable) to provide a full benefit to the DOD Medicare-eligible population. But it would not be hard to analyze what would happen if enrollment fees were lower than we have assumed here.

Using our models for each option and each affected beneficiary category, we projected the enrollment in the system and enrollment at MTFs, and then estimated the effects on cost and military health care readiness. Table 2 summarizes what we found. We project that there are 1.827 million full-time-equivalent adult users of the MTFs today and that that would fall somewhat under each option.<sup>1</sup> Option 1 shows a decline, but that option only assumed changes for retirees under 65. The greatest decline would occur should FEHBP be offered to all DOD non-active-duty beneficiaries. The DHP loses population, although DOD would find many beneficiaries relying on FEHBP.

Costs would change as well, although there are many assumptions that we've made that had an impact on the results. For example, we assumed from the beginning that DOD would attempt to keep the family members of active duty from paying more than they do now, at

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1. In table 2, the use of care pertains to adults only. For computing costs, however, we have added the children back and assume that their use of care follows the adults in the same proportions.

least from the point of enrollment fees to DOD or premiums to FEHBP. DOD's taking on this cost added fairly significantly to total cost for both options 2 and 3. Another factor concerns the cost of providing care to the DOD Medicare-eligible population. The values shown in table 2 assume that Medicare pays for much of the care if this population takes one of the DOD options. Option 2 actually appears to reduce costs by about \$900 million, but that would only occur when Medicare is the first payor and Standard/Extra becomes a second payor. In the main text, we show that costs would be as much as \$2.5 billion higher if DOD has to cover all of the Medicare-eligible costs should Medicare not contribute.<sup>2</sup>

Table 2. Summary of findings for all options

	Current	Option 1	Option 2	Option 3
Use of care (in millions)				
MTF <sup>a</sup>	1.827	1.585	1.392	1.320
Total DHP	2.651	2.660	3.139	1.658
FEHBP				1.653
Cost of care to DOD (in \$B)				
MTF	7.118	6.387	5.463	5.209
Other <sup>b</sup>	2.841	3.601	4.784	8.427
Subtotal	9.959	9.988	10.247	13.636
<b>DOD enrollment fees-beneficiaries</b>	<b>.143</b>	<b>.156</b>	<b>1.302</b>	<b>.467</b>
<b>Net cost to DOD</b>	<b>9.816</b>	<b>9.832</b>	<b>8.944</b>	<b>11.816</b>
<b>FEHBP premium cost-beneficiaries</b>				<b>1.243</b>

a. The current case includes space-available care.

b. Includes premiums paid by DOD for FEHBP.

We've now seen that there are significant effects both on the use and cost of the DHP. The last effect is the impact on readiness because of the reduced population using the MTFs for care. We examined

2. Indeed, many of the savings when people leave the system might not materialize as well. We've assumed that costs would change as the population changes; however, if much of the cost of care was fixed, this probably would not happen.

whether the population left after the changes would keep military physicians sufficiently busy to keep their skills up to date.

We found that the loss of population would not create a significant problem for most specialties, but there would be problems for general surgery, orthopedic surgery, and emergency medicine. Even for these three, the problem is worsened, but the reduced population levels didn't really cause the problem, with orthopedic surgeons being the lone exception. Today's population levels would still imply that workload would be insufficient.

## The benefits and costs of enrollment

In this section, we describe the benefits that would likely result from implementing universal enrollment. Some of the benefits would accrue to the beneficiaries directly, others would improve the management of the system, which in turn, should lead to efficiencies and better care for beneficiaries.

We also recognize, however, that introducing universal enrollment would not be costless. Beneficiaries may well have to pay a higher share of their health care bill, and DOD would probably have to implement new administrative procedures. Our analysis will not quantify all such costs and benefits, but in this section we lay out some of the arguments on both sides. Rather than focus on the benefits and costs of *specific* enrollment options, we provide a general discussion that should apply to virtually any option.

## Background on the DHP

The current system has three major parts. Prime serves beneficiaries in much the same way as any health care maintenance organization (HMO) would. A beneficiary signs up with the local military treatment facility (MTF) or a network of civilian providers. The networks that have been set up under the managed care support (MCS) contracts are designed to deliver primary care services, with referrals back to the MTFs or other civilian providers for specialty services as the need arises. If the MTFs cannot provide the required services, because of limitations on their staff/facilities or a lack of capacity, the MCS contractor is responsible for ensuring that the service is provided in the civilian sector.

Under the current system, all beneficiaries under 65—whether active duty family members (ADFM)s or retirees and their family members—have other options in addition to Prime. They are eligible for TRICARE Standard or Extra, which resemble other fee-for-service



(FFS) and preferred provider organization (PPO) plans, with deductibles, copayments, and out-of-pocket (OOP) maximums.<sup>3</sup> An important feature of both plans is that there is currently no enrollment and no corresponding fee to participate.

The difference between the two plans is that Standard allows the beneficiary to use any provider or facility. In other words, there is no explicit or formal network of providers who provide care to DOD beneficiaries. Both ADFMs and retirees must meet an outpatient deductible, and ADFMs must generally pay 20 percent of allowable charges while retirees pay 25 percent of allowable charges. Providers who accept Standard patients must accept the allowable charges. TRICARE Extra relies on a network of providers who have contracted with DOD to provide services at a discounted cost. The copayments are slightly lower when beneficiaries use this option.

The third option open to DOD beneficiaries, including the 65+ population, is receiving care on a “space-available” basis at military hospitals and clinics. This means that the beneficiaries do not have to enroll to receive care; as long as capacity in the system exists—whether for primary or specialized care—they can be seen and treated with DOD paying virtually all costs. Space-available care is particularly important to DOD beneficiaries older than 65 because of their ineligibility for TRICARE Standard/Extra or Prime.

## Benefits

Because belonging to Prime is similar to belonging to an HMO, it most closely resembles plans that are offered by private sector employers to their employees. Prime beneficiaries enroll, which means that DOD should know which and how many beneficiaries make up its covered population. It can then plan for what it takes in terms of resources to provide required services. Of course, the transient nature of active duty personnel and their family members

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3. See [1] for additional details on the specific benefits and costs under all DOD plans.

complicates things, but the basic idea is still similar to what employers provide to their employees.

TRICARE Standard/Extra resembles many managed FFS plans, particularly when the network option is included. As we said earlier, what really distinguishes these plans from those offered by other government agencies or private sector firms is the lack of explicit enrollment and any associated enrollment fees. Perhaps the most important point to note is that care paid for by TRICARE Standard/Extra, although a liability of DOD, is delivered outside the direct care system.

Space-available care is probably the form of care that is most different from what is provided by other health care plans. Of course, there are after-hours or neighborhood clinics that often take care of those without insurance for little or no cost. But the patients of these kinds of clinics are not generally those whose care is provided through an employer. The clinics certainly provide an important service, but they offer mainly emergency or episodic care.

Given the way the system functions today, how would it—including the management of the health care plan itself as well as its beneficiaries—benefit from enrollment? We argue that the benefits that would result from enrollment can be summarized by the following broad categories:

- Reduced uncertainty concerning exactly who is to receive care from the MHS
- The ability to focus on providing the appropriate care for each beneficiary.

We will describe each of these in more detail below.

## **Reducing uncertainty**

Because anyone other than Prime beneficiaries can submit claims through Standard/Extra<sup>4</sup> or receive care on a space-available basis, the system cannot know with any certainty how many beneficiaries

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4. As we said earlier, with few exceptions, TRICARE Standard/Extra is not available to the DOD Medicare-eligible (i.e., over 65) population.

will rely on it for care. From a management point of view, the system must estimate who relies on it if it is to provide the appropriate level of resources. It's certainly true that civilian health care plans cannot tell what the future holds for their beneficiaries' needs and the plans' subsequent costs. For example, health care costs were moderate in the early part of the decade, but they began to accelerate over the last few years. Nonetheless, the civilian plans at least know to whom they must potentially provide care, removing an important source of uncertainty in their future liability.

Is DOD affected by what happens to health care costs in the civilian sector? The answer is yes, but DOD probably has some additional control on the resources required for providing health care. For example:

- With so many beneficiaries, the "risk pool" for health care use is larger and, therefore, more predictable than under most plans.
- Military compensation can be controlled more tightly, at least in the short run, before problems in recruiting and retention of providers become issues.
- As a large provider of health care services, DOD can buy items, such as prescription drugs, in large quantities at lower prices than in the civilian sector.

Many non-Prime beneficiaries rely on the system for only a portion of their care. Which portion they require—outpatient services, inpatient services, prescription drugs, mental health, and so on—can have a major effect on the types and associated costs of the required resources.

In fact, because beneficiaries do use the system in different ways, OASD/HA must estimate the number of *full-time equivalent* (FTE) users that rely on the system. The system first must track how many beneficiaries are *eligible* for care. The number of eligibles includes all active duty personnel, their family members, retirees and their family members, those in the National Guard or reserves, the Coast Guard, and a few government civilians who serve overseas and have no other

source of health care other than military hospitals and/or clinics. There are more than 8 million DOD eligibles.

Not all rely on the DHP. Some are referred to as *ghosts*. This term refers to those who rely on civilian sources for their care and don't submit charges that must be paid by DOD. Though they could use the system and, therefore, create liabilities for DOD, they don't *today*, which means they are not an immediate concern, only a potential one. They may be covered by an employer's plan or they may feel it isn't worth the effort to file a claim. But, that could change if the DHP made it appealing for them to rejoin the system. An example that we'll examine later would arise should DOD offer to pay for all or part of their private insurance needs (as under FEHBP). This would undoubtedly draw many people who rely on their own insurance back into the system, creating a new and expanded liability for DOD.

How many people rely on the DHP either as Prime enrollees, Standard/Extra, or space-available users? DOD doesn't really know. It's reasonable to assume that anyone on active duty or enrolled in Prime should be counted as a user (or a covered life, a common term in the health care business). What's more difficult is determining how many FTE users there are in TRICARE Standard or Extra or space-available. Unfortunately, that must be calculated by putting "pieces" of care together because the numbers are based on workload counts, not people. Some number of people who go for outpatient visits, or inpatient stays, or pharmacy prescriptions makes up an FTE user.

Even if this number is accurate, under the best of circumstances, it's only an educated guess, so the next question is, how many FTEs are there using the direct care system versus Standard or Extra? Military health care managers don't know this either, although we'll attempt to estimate it in this study.

To summarize, it is very hard to manage a system in which its managers do not know who uses it for different kinds of care. Estimates are made and are probably done as well as possible, but even then they may be inaccurate. As an insurer, DOD takes on the health care risks of its beneficiaries. The added risk of not knowing who will use the system can be eliminated by enrollment.

## Improving the health of DOD beneficiaries

The discussion thus far has focused on the difficulties with managing the system. From the point of view of the care provided to beneficiaries, there are other issues as well. We'll use the MHS's own term to describe an important benefit of enrollment—namely, implementing procedures that will lead to *population health improvement* (PHI).

The basic ideas underlying PHI are associated with many initiatives being discussed and implemented in the civilian health care sector (see [2], for example). PHI begins with the notion that medical care has, in the past, been associated with the focus on disease. In other words, the focus has been on dealing with patients only when they present themselves for treatment. Health care becomes highly episodic with many unplanned visits. There is a lack of continuity in the care of beneficiaries, which ultimately leads to little if any increase in their "health status."

The new focus under PHI is on the *health* of the beneficiary. "Appropriate" access is encouraged. It may start with an assessment of needs before any disease or problems present themselves. There are initiatives to prevent primary disease or injuries. Appropriate access may take the form of proactively providing blood pressure checks or warning beneficiaries to wear seat belts when driving. In other words, some simple methods may lead to healthier and happier beneficiaries.

Other initiatives may be more complicated. In addition to preventive care, the focus turns to utilization (or demand) management and disease (or evidence-based) management. Utilization management is already standard practice in the MHS. But, the change here is turning away from a strict reliance on utilization review, which has taken on a negative connotation by focusing on reducing bed days, denying care, and constraining provider practice, to one that focuses on quality management. According to the mission statement of the MHS Optimization Plan (on page 10 of the MHS interim report), initiatives should deliver "best value" health care that balances customer service, high technical quality, and lower costs.

Disease management focuses on managing chronic conditions. The system should coordinate and deliver services focusing on making the

patient comfortable and delivering appropriate care. It targets high-cost, high-volume, and complex diseases/conditions so that positive outcomes can be achieved for the patient as well as the system by using cost-effective methods.

A more complete description of the three elements can be found in numerous papers and briefings being offered under the HA/TMA/Services MHS Optimization Plan. The hope is to ensure continuity of care of the patient who, in turn, will respond with higher levels of satisfaction and loyalty to the system.

It's clear that episodic care and PHI are essentially not compatible. Enrollment becomes a requirement for this kind of system to work. The DHP must know who relies on it for care and the patient must know who will provide that care on an ongoing basis. Beneficiaries who sometimes use TRICARE Standard/Extra or even space-available care cannot fully benefit, if they can benefit at all, from this new focus on population health.

## Costs

Although the benefits are important, we can't ignore the potential costs to implementing enrollment, some of which we've alluded to already. We summarize the main costs as follows:

- Reduction in options open to beneficiaries, particularly in removing space-available care
- Higher beneficiary costs should enrollment fees be initiated
- Potential reduction in readiness due to loss of workload as space-available users leave the MHS.

Let's begin with the reduction in options. The use of part-time or full-time space-available care would no longer be permitted under a universal enrollment scheme. For some current beneficiaries, this would not only limit their options but eliminate their access to the system completely—namely the 65+ beneficiaries.

The fee structure now is fairly modest. We've already provided a brief description of the current set of enrollment fees and other aspects of

the underlying health care plan under Prime or Standard/Extra. Only retirees currently pay enrollment fees, which are relatively modest: \$230 or \$460 (for a family) for Prime. We'll describe our proposed fee structure shortly. We still will impose no fees on the family members of active duty personnel. Realistically, we felt that it would be too much of a change from the current system and perhaps too much of a hardship on them to do so. Nonetheless, even here, we haven't made the plan offerings completely open-ended. There should be some limits if the system is to be affordable for DOD.

The last cost we'll discuss concerns the potential effect on readiness. Raising fees and limiting access may well decrease the population of beneficiaries who had been using the MTFs. Providing space-available care, with all of the negative effects on managing both the system and beneficiary health care, does provide many patients and, therefore, workload, for physicians and other providers. We need to examine, first, whether there is any reduction in population and, second, the extent to which the reduction would mean that there would be insufficient workload for military physicians.<sup>5</sup>

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5. We don't want to ignore the effects on other providers or on graduate medical education. We just felt that we needed to start with the fully trained physicians. More work would be needed to expand the scope of examining the readiness effects to everyone in the system.

## Specifying enrollment options

In this section, we describe the options that we've considered in our analysis. The next section describes the method or set of "rules" we used in determining how many beneficiaries would enroll in each option, and the final section presents our estimates of the numbers of enrollees and the implications of the changes in enrollment for the DHP with regard to cost and readiness.

### Considerations

We considered a number of factors when determining the options for enrollment. We began with the benefit design of the current system. At present, only retirees under 65 pay any enrollment fee to participate in Prime. Other than at a few limited demonstration sites, the over-65 retirees can't join Prime at all nor can they use TRICARE Standard/Extra. We should also point out that, with few exceptions, our focus on costs within a plan is limited to the premium or enrollment fee; we didn't redesign the deductibles or copays. We recognize that these may be contentious—many beneficiaries don't like paying fees at network providers—but other than one proposed plan that we'll describe, we felt that later work could focus on changing deductibles and copays.

Although imposing mandatory enrollment is a major change, we wanted to suggest changes that we felt were not entirely outside the scope of what one observes in other standard employer-provided plans. Furthermore, we wanted to design plans that could potentially include the 65+ population. In [1], we showed that the DOD health care benefit is a rich one, but there are some problems. The value of the retiree health care benefit is somewhat less than that offered to federal civilians under FEHBP or by private sector firms to their workers. The main reason for the difference is the reduction in benefits when retirees reach their 65th birthday. Therefore, we felt from the



beginning that imposing fees on retirees under 65, while clearly a loss in the benefit, could be “made up” in whole or at least in part if the beneficiaries knew they wouldn’t entirely lose the benefit when they reach 65.

Of course, the over-65 population is an expensive group to cover, especially when Medicare doesn’t pay part of the bill. Most plans, including most FEHB and private sector plans, can keep costs down for this group only if Medicare becomes the first payor. Otherwise, their costs can be as much as 3.5 times that of the average beneficiary.

We based the proposed “plans” on what we had heard senior DOD leaders had proposed as possible alternatives, including our sponsor, the USD. For example, one proposed plan focused exclusively on retirees under 65, but wanted to make Prime more appealing by lowering its enrollment fee from \$230 per beneficiary to \$150 (or from \$460 to \$300 per family). The USD specifically asked that we examine FEHBP in our comparison of benefits, and we wanted to continue the analysis by allowing it to be an option in this analysis.

Another consideration was that we wanted to ensure that beneficiaries would “stick” with the plan. If the enrollment fees are too low, anyone can sign up, but enrollees could never or only episodically use the services. In that sense, it would be like space-available care and would do little to improve the problems the system faces without enrollment. By “imposing” fees that are roughly in line with low-cost plans elsewhere, we believe that the beneficiary would still be receiving a reasonable health care plan at reasonable cost. Some may leave the system, but at least they had the option to join. And that would, in some cases, include the 65+ population, whose members can use the MHS only if they reside near an MTF.

Finally, we wanted to design plans that would benefit not only those near an MTF. The plans we’ll suggest, because they are similar to what exists today or are commonly requested by beneficiary groups, would help those in and out of catchment, although beneficiaries may well respond differently depending on where they live. We believe our plans come close to the notion of providing a universal benefit that may not suit some beneficiaries, but would at least provide them with options. The question is whether the costs outweigh the benefits.

## Option 1—Changes to Prime and Extra only

The first plan was designed to affect the under-65 retiree only and is the most limited in the kinds of changes to be imposed. Because of that as well as the fact that it was under active consideration for a while, it seemed like a good place to start. As we'll see, our other options would affect all non-active-duty beneficiaries.

Under option 1, the under-65 retirees would have the choice of enrolling in Prime, enrolling in a redesigned Extra, or choosing no enrollment, but having the option of using a redesigned Standard. Table 3 presents the changes in the system. This plan does not impose universal enrollment, even for young retirees, because they could remain in TRICARE Standard at no cost. Those in Standard would still face a \$150 individual deductible or \$300 family deductible, with 30 percent copays and less choice of providers, but the notion was that if beneficiaries wanted to participate in a "free" plan, they would have one. Of course, it would only be free if they used no health care, because of the relatively high deductibles and copays.

Table 3. Plan design for option 1

	Prime	Extra	Standard
Enrollment fee	\$150/individual or \$300/family	\$150/individual or \$300/family	\$0
Deductible	None	None	\$150/individual or \$300/family
Copays	None at MTF, same as today if use network	20% of negotiated fees in network, 25% out of network	30% copays, must use network if possible

Those retirees who participate in Prime would pay \$150 per person (\$300 per family), which is lower than the fees today (\$230 and \$460, respectively). Extra would be redesigned. Beneficiaries would have to pay an enrollment fee as shown in the table, comparable to Prime, and the deductible would be waived. Extra enrollees would be able to use network providers and pay 20 percent of negotiated fees or use non-network providers and pay 25 percent of allowable charges. The idea is to make Prime the most appealing option but leave in place the no-cost and no-enrollment option—Standard. But those in Extra

must now enroll. Thus, as we said, this plan represents a limited enrollment plan, but it will be useful as a starting point in our analysis.

## **Option 2—Prime and TRICARE Standard/Extra with fees**

The next plan also starts with the current system, but now imposes mandatory enrollment. There are no major redesigns of plans as there are in option 1. The only thing we've changed from the present system is the introduction of enrollment fees for retirees. The option affects all three beneficiary categories (other than active duty who are all enrolled in Prime). Although we impose enrollment even on active duty family members, we should point out that in this plan, as well as the last option, we will not impose any enrollment fees or premiums.

Table 4 presents the changes in the enrollment fees and options available. There are more significant changes for the retiree population. Because the under- and over-65 retirees face different options now, let's first focus on the effects for the under-65 retirees.<sup>6</sup> The plan imposes a higher fee on Prime—\$400 per person—than they face today. The increase is fairly small, about \$15 per month, and is well below most civilian-sector HMO plan costs (as in FEHBP). Currently, retirees under 65 are eligible to submit claims through TRICARE Standard/Extra, which we've said closely resembles a managed FFS plan in the civilian sector. They can continue to use these plans, but now they must enroll and pay a fee of \$650 per person to join. We can't really distinguish between those who would prefer a network and those who wouldn't, so we implicitly assume they join the Standard/Extra "plan."

As we said, we determine how many of the under-65 group would join, how much it would cost DOD (or save compared to the current system). We realize that, from a political point of view, these costs may make the program infeasible. But, by then examining what happens when the over-65 population joins the program, we felt that the gains

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6. For the second and third options, we perform the analysis for each beneficiary group separately.

in value of the plan here might outweigh the loss due to mandatory enrollment and higher fees.

Table 4. Eligibility and enrollment fee changes under option 2

	Prime		Standard/Extra	
	Current	Option 2	Current	Option 2
Eligibility <sup>a</sup>	ADFM and retirees < 65	All	ADFM and retirees < 65	All
Enrollment fees				
ADFM	\$0	\$0	\$0	\$0
Retirees (all)				
Individual	\$230	\$400	\$0	\$650
Family	\$460	\$800	\$0	\$1,300

a. Currently, the over-65 retiree with very few exceptions can't join Prime or use Standard/Extra.

## Option 3—Offering FEHB to beneficiaries

The last option is to offer participation in FEHBP to non-active-duty beneficiaries. Because of many similarities between the kinds of plans offered under FEHBP and TRICARE Standard/Extra, there would be little advantage to assuming that both plans are available. FEHBP offers many different plans with different sets of benefits and fees.

If options 2 and 3 are so similar, wouldn't we project similar numbers of enrollment? The simple answer is that the numbers will be similar; because of our method and assumptions, however, there are some subtle differences. We rely on beneficiaries' stated satisfaction with their current plan to determine who would join or leave their current plan. Based on responses to survey questions by beneficiaries who now rely on TRICARE Standard/Extra, we use this information when determining who would sign up.

Another important issue concerns the cost to the beneficiary of an FEHB plan. We assume there will be differences in plan design for the ADFM and retirees. Table 5 summarizes the changes associated with option 3. We will not limit the number of plans that active duty family

members can choose; as today, that will depend mainly on location. We will, however, limit their costs. We will assume in this analysis that DOD will subsidize the ADFMs by paying up to a set amount that will buy them a "good" plan that will provide coverage for all dependent family members.<sup>7</sup> All other beneficiaries, including the 65+ population, can join but must pay their share of the premium, just like any federal civilian employee.

Table 5. Eligibility and enrollment fee changes under option 3

	Prime	Standard/Extra	FEHB
Eligibility	Available to all	Unavailable	Available to all
Premiums			
ADFM	None		Potentially none, but up to set amount
Retirees (all)	\$		
Individual	\$400		Same as current federal civilians
Family	\$800		Same as current federal civilians

We turn next to our discussion of the data and method we used to determine who would take each plan assumed in the different options.

7. We don't claim our methods are so exact that we can determine differences in enrollments for any plan. FEHBP offers a multitude of choices. Our concept is to have DOD pay for an ADFM's "typical" local HMO plan or provide the cost for a Blue Cross/Blue Shield standard option plan, not one of the "gold-plated" plans that could cost several thousand dollars more. The standard option provides good care at a fairly reasonable cost: for 2000, a federal civilian contributes less than \$800 for an individual plan and a little more than \$1,700 for a family plan.

## Method

We've just described the enrollment options that we assumed for purposes of this analysis. In this section, we provide additional details on:

- Data sources
- How we used the information from survey responses to determine DOD beneficiaries'
  - Insurance holdings or participation in specific health care plans (including Prime and Standard/Extra)
  - Stated desire to disenroll or enroll in Prime in the future
  - Source of health care services, i.e., military or civilian
- Specific rules for projecting enrollment, for each group.

## Data

The main source of information was the OASD/HA survey of DOD beneficiaries. The survey is sent out annually to a sample of beneficiaries and asks them to respond to a series of questions concerning

- Their use of health care services over the past year
- Whether they received care in military or civilian facilities
- Their holdings of insurance, both private and Medicare
- Their satisfaction and overall ratings of the health care they receive
- Their personal characteristics, including age, sex, race, and education.

CNA has used earlier versions of the survey many times before. As part of the tasking for USD, our earlier paper [1] relied on the 1997 survey of DOD beneficiaries, as well as a similar survey of federal

civilian employees, to compare satisfaction levels between DOD and federal civilian beneficiaries.

For this analysis, we've relied on the 1998 survey. In general, all of the surveys ask fairly detailed questions on the types of health care insurance held by the beneficiaries. Unlike the 1997 survey that asked beneficiaries who paid for their insurance (e.g., their employer or themselves), the 1998 survey did not, but it did include several other questions that helped in our determination of who would enroll in each plan.

The survey contains a lot of useful information about the beneficiary population, but contains little if anything on how people respond to changes in enrollment fees. Therefore, we used a second source of information—the findings from a civilian study that analyzed the sensitivity of consumers to changes in health care premiums [3]. The study examined the effects when the University of California (UC) moved to a policy of limiting its contribution to the cost of the least expensive plan that they offer their employees, which meant that OOP premiums increased for roughly one-third of them. The authors' results (derived from estimating the sensitivity of the UC beneficiaries to this price increase) showed a strong response. Individuals facing premium increases of less than \$10 per month, which in today's dollars would be close to the change in the Prime premiums we're assuming (about \$15/month), were roughly 5 times as likely to switch plans as those whose premiums remained constant. We incorporated this kind of information into our enrollment model.

## General approach

We realize that there is no perfect way to predict who would remain in Prime or Standard or leave the system entirely, given the large changes in the system that we've assumed. Nonetheless, our approach is one that we used recently to predict the participation rates of DOD beneficiaries to proposed changes in their health care benefit. For example, in [4], we used the survey to help determine the number of Medicare-eligible beneficiaries who would take advantage of an expanded national mail order pharmacy program. Even closer in concept to the current study was the analysis of how many of these beneficiaries would participate if DOD offered FEHBP.

We take a similar approach here. DOD beneficiaries often have additional health care alternatives besides the DHP. Family members and retirees who work may have coverage provided by their employer. The 65+ population has access to Medicare. It's important to take note of these alternatives because they will directly influence how they react to changes in the benefit offered. For example, according to the survey, most 65+ beneficiaries have some sort of health care insurance that they pay for themselves, which in the majority of cases means a Medigap plan. These plans are usually at least as expensive as a typical FEHB plan and don't cover as many services (e.g., pharmacy is only covered by a few and very expensive Medigap plans). Therefore, we would argue that, over the long run, as the "new" policy of offering FEHBP is put in place and both insurance firms and beneficiaries see the plan is permanent, the beneficiaries would realize they would be much better off signing up for FEHBP than paying for a Medigap plan.<sup>8</sup>

### **Grouping beneficiaries by health plan participation**

We begin by sorting the beneficiaries into mutually exclusive groups. For the ADFMs and retirees, we group them as follows:

- Prime members
- Primary insurance holders (as opposed to those with supplemental insurance, such as CHAMPUS supplemental)
- FEHBP policyholders
- Standard users—based on responses that imply that the beneficiary relied on Standard/Extra but did not usually use a provider in the network

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8. We believe many of the current problems with the FEHBP demonstration, in terms of low participation rate, results from the transitory nature of the demonstration itself. Three years is probably insufficient for the beneficiaries and the insurance firms to feel confident that any unexpected costs or other problems could be dealt with. Here, we assume that there are no transitional issues and that any given option has been available long enough to have reached a "steady state."



- Extra users—based on responses that imply that the beneficiary relied on Standard/Extra, but did usually use a network provider
- Others—those who don't meet any of the foregoing criteria.

Because these are mutually exclusive categories, beneficiaries that we put in the Standard group did not have some other form of primary insurance. In other words, they did not have a plan through their employer nor did they purchase one on their own. Those who are in the primary insurance group may have submitted a claim through TRICARE Standard, but at most TRICARE would be a second payor. The *other* category represents those who, for some reason, either paid for health care on their own and/or relied on space-available care.<sup>9</sup> Where are the other space-available users? In fact, they are in all of the categories, with the exception of Prime members. Later in the paper, we calculate just how much space-available care there is in the system today, in terms of full-time equivalent users.

Because the 65 and older beneficiaries often rely on Medicare supplemental plans (i.e., Medigap plans), we created two distinct categories representing for the 65+ insurance holders—those with a primary insurance plan only and those with at least a Medigap supplemental plan (i.e., they might have only a Medigap plan or a Medigap and some other plan). The survey asks first about supplemental insurance holdings (and explicitly asks about Medigap holdings) and follows

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9. Another group in this and several of the other categories are those who had no health care costs during the year. Enrollees in a plan, including Prime, are still considered users even if they did not consume health care services (it's a small group anyway, at most 1 or 2 percent). But, because submission of a claim is the only way we can identify Standard/Extra users, there are, by definition, no non-users of health care services in these groups.

with a question about other insurance or managed care plans that would cover them.<sup>10</sup>

Thus, the categories for the Medicare-eligible population include:

- Prime members
- Supplemental plan holders, including those with multiple insurance holdings
- Primary insurance holders only
- FEHBP policyholders
- Medicare-HMO participants
- Others.

Neither Standard nor Extra is an option for the Medicare-eligible beneficiaries (which means that, other than the few Prime enrollees, all users are space-available users). Also, note that we adjusted the responses to the question asking if they were enrolled in Prime. TRI-CARE Senior Prime is a new program with relatively few participants. Yet, the number of Medicare-eligibles who say they are enrolled in Prime is much higher than the number enrolled in Senior Prime. Therefore, we adjusted the Prime group by using another question that asked whether, over the past year, they had received most of their care from Prime or Senior Prime. The combination of the two questions put the numbers derived from the survey much closer to the administrative numbers.

## **Responses on planned enrollment and disenrollment**

For each of these groups, representing their enrollment in Prime or participation in some other health plan, the next step was to use the

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10. Based on the 1997 survey, more than 90 percent of DOD 65+ beneficiaries said they had Medicare, parts A and B, but the 1998 survey suggests that the number had fallen to the mid-80-percent range. We believe the number is closer to the 1997 value, but the lower 1998 number may be the result of the way the question on insurance was asked. Whenever possible, we've "adjusted" the responses by taking into account related questions.

survey to determine whether those in Prime planned to reenroll and whether those not currently in Prime planned to enroll later. We should point out that the responses we'll describe were useful for ADFMs and retirees under 65, but not for the 65+ group because of their low current enrollment and the general unavailability of Prime (with the exception, as we said earlier, of a few specific sites).

Prime enrollees were split into three groups: (1) those who were likely or very likely to reenroll, (2) those who were neither likely nor unlikely or did not know (which we called the *don't knows*), and (3) those who were unlikely or very unlikely to reenroll. Similarly, those who were not currently enrolled were split into (1) those very unlikely or unlikely to enroll, (2) those who were neither likely nor unlikely and the not-sures (again, the don't-know group), and (3) those who were likely or very likely to enroll.

### **Creating categories representing the source of care**

The last major categorization had to do with where DOD beneficiaries received their care and whether they were satisfied with it. Again, this is similar to what we had done in [4], but we've now added the beneficiaries' satisfaction into the analysis.

Here, we used the survey to determine, first, whether the beneficiary used any health care services. In general, we could determine where they received care because the survey asks them whether they have been to a military provider or facility over the past year as well as whether they have been to a civilian provider or facility. Beneficiaries who responded negatively to each of these questions were characterized as not having used any health care services over the year. The numbers were small—just a few percent.

We then broke out those who usually went to military facilities for their care from those who usually went to civilian facilities. Not surprisingly, those in catchment are far more likely to use the MTFs than those who reside out of catchment. We broke them down further into those who agreed or strongly agreed with the statement that they were satisfied with the care they received from those who disagreed or strongly disagreed. For the ADFMs and retirees under 65, our last category was simply civilian users. Therefore, we created four groups

for all under-65 beneficiaries—no health care, satisfied military users, dissatisfied military users, and civilian users.

Because the Medicare-eligible beneficiaries in general are not eligible for Prime, we couldn't rely on questions concerning whether they planned to enroll in or disenroll from Prime. As an alternative, we felt that it was useful to incorporate what they thought of their current source of care, which was usually in the civilian sector. So, we expanded the categories of civilian users into those who were satisfied from those who were not. This gave us five categories representing the sources of care—the first three being the same as the under-65 beneficiaries, and the two additional ones for civilian users.

## **Designing the rules for projecting enrollment**

In this section, we present the model that we used to derive enrollment for the three options. The models are really a set of rules that we used to project enrollment. In all cases, we begin with the beneficiary categories—ADFM, retirees under 65, and those over 65—and then categorize them, as shown earlier, by their plan type or insurance holdings. As noted, we do this separately for those in and out of catchment because of the differences one would expect in type of plan relied on for care.

Next, we create a “matrix” for each group. As an example, for those already in Prime, the rows of the matrix represent, respectively, the beneficiaries who plan to reenroll, the beneficiaries who don't know what they will do, and the beneficiaries who plan not to reenroll. The columns represent their sources of care. There are analogous matrices for each of the non-Prime groups. Although there are too many cases to describe them all in detail here, we will present some examples to illustrate our method.

### **Rules for projecting enrollment in option 1**

We'll begin with option 1, which would affect only retirees under 65. Remember that the plan included a lower enrollment fee for Prime members and no fee for those who do not wish to enroll but stay in Standard, though they would face a large deductible and higher

copays. The plan also allows enrolling in Extra, but beneficiaries would have to pay \$150 for an individual plan or \$300 for a family plan.

### Current Prime enrollees

Table 6 presents the matrix that we derived from the survey for Prime enrollees only. We created similar matrices for each non-Prime group as well. Here, the first cell in the upper left-hand corner shows the percentage of Prime enrollees who plan to reenroll, but had no visits to health care providers or facilities over the past year. The percentage is small, about 1.44 percent of all Prime enrollees. The largest percentage is given by those Prime members who were satisfied with the MTF and plan to reenroll—almost 53 percent of Prime enrollees fell into this category.

Table 6. Matrix for current Prime retirees under 65 (percentages)

	No health care	Military user satisfied	Military user dissatisfied	Civilian user	Total
Plan to reenroll	1.44	52.56	6.43	20.13	80.56
Don't know	0.23	6.01	2.68	3.96	12.67
Plan to disenroll	0.08	2.60	1.63	2.26	6.57
Total	1.74	61.17	10.74	26.35	100.0

The last row and last column show the totals for that specific column and row, respectively. For example, almost 81 percent of all Prime beneficiaries plan to reenroll, almost 13 percent don't know, and a little more than 6 percent plan to disenroll. Of the users of military facilities, 61 percent were satisfied with the care they received and 11 percent were not.

Does the matrix alone tell us what they plan to do? No, because their responses were based on the current system, not how the system would change under option 1. Yet, we use the information in the matrix to project what would happen under the new option.

This is where we define the rules that place beneficiaries in their new categories. We'll continue to use table 6 to illustrate how we did this. For the Prime members, we assumed that all of those in the first two

rows would reenroll. These two rows represent those who plan to reenroll or those who stated they didn't know if they would. Option 1 lowers the price they would have to pay, from \$230 to \$150. With space-available care no longer an option, we've assumed that their only other choice to stay within the system is to pay as much for Extra or disenroll and plan on using Standard when health care expenses arise.

Would all of them really stay? How about those who weren't happy with the care they received at MTFs? One option for this group is to stay with Prime but to enroll with network providers. Of course, our assumptions here may be too strong; some might leave, but there's no way we can be absolutely sure. Our goal is (1) to get the numbers *approximately* right and (2) to design a set of rules whose underlying assumptions can be changed so that new values can be easily obtained as a way of checking whether our projections or estimates are "in the ballpark."

Let's complete the look at current Prime enrollees by focusing on those in the last row—those who plan to disenroll from Prime. Here their current source of care matters. We assumed that those with no recent health care costs, representing low users of health care, wouldn't want to pay an enrollment fee. They would disenroll from Prime and rely on Standard. That way, they don't pay anything if they are really healthy. Next, we assume that those who were satisfied with the care they received at MTFs would reenroll after all. Again, the price has been reduced and they can't use space-available care anymore. Finally, for those dissatisfied with the care they received or who had used civilian sources, we check to see if they had other insurance, including FEHBP (as a small proportion of Prime users do). We assume that those who did have insurance would leave the system and those without insurance would reenroll in Prime.<sup>11</sup>

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11. Isn't it possible they would join Extra or Standard? Again, some might, but in general we assumed that Prime would be their first choice. As we'll see, this won't affect our estimate of the costs (because we can't really disentangle the cost of Prime from what it costs DOD to pay claims through Standard or Extra) and we felt that it was reasonable to assume that they would stay with Prime.

### **Non-Prime users**

Thus far, we've covered only the first group, or current Prime enrollees. That leaves similar sets of rules for determining what the other groups would do. We assumed that the beneficiaries in all non-Prime groups who planned to enroll in Prime would do so. That leaves those who didn't state whether they would enroll or stated that they were likely not to enroll.

We assumed that those with primary insurance, FEHB, or Standard behaved in a similar manner. Those who do not plan on joining Prime would stay with their own insurance. Those who don't know whether they would join Prime were a bit more complicated. We assumed that about 25 percent, roughly the percentage who according to [3] would leave their plan for a \$10 per month reduction elsewhere, would take Prime, but the remaining 75 percent would continue to use their own insurance or remain with the Standard option.

It was a little more complicated for the Extra users. Those who were not going to join or didn't know whether they would, but who were satisfied with the MTF, were assumed to join Prime. If, however, they were dissatisfied with the MTF or used civilian facilities, we assumed that about one-third would join Prime, one-quarter would move to the no-fee Standard option, and the rest would enroll in Extra, pay the fee, and have no deductible and lower copays.

The final group were those we characterized as the other category. We assumed that the remaining beneficiaries, in the won't-enroll or don't-know categories, would join either Prime or Standard (specifically one-third would join Prime, the rest would not enroll and rely on Standard).

## **Rules for projecting enrollment in option 2**

Option 2 was assumed to affect all three beneficiary groups, not just the under-65 retirees. In options 2 and 3, we derived enrollment separately for the three groups. One complication that could affect the beneficiaries' response is whether retirees under 65 would stay with the system to ensure they could remain when they reach 65. That may

be a rational response, but we had no way of incorporating that kind of behavior in our model.<sup>12</sup>

We won't provide all of the details for each beneficiary group, although we will provide a broad overview of how we determined what each group would do.<sup>13</sup> The rules were designed to capture what each group, in and out of catchment, would do if faced with the loss of space-available care, a slightly higher charge for Prime, and a charge for enrolling in Standard/Extra. For the latter, we really didn't redesign the benefit, in terms of changing deductibles and copays from today, but we assumed that beneficiaries could still take advantage of the network under Extra if they so desired.

#### **Active duty family members**

For the ADFMs, we assumed no enrollment fee, so most, as now, will stay with the system. The only real change is that they need to state what they plan to do and can't fall back on space-available care. As in option 1, we relied on the combination of responses concerning whether they planned to enroll or disenroll and their current source of care (and satisfaction with the use of military facilities). But, we also incorporated some additional information that we didn't use in the previous option for the retirees. As an example, let's focus on non-Prime family members who fell in the primary insurance or FEHB groups. We now also included information on those beneficiaries who had a CHAMPUS supplemental policy. We assumed that those who did have such a policy and were not planning to join Prime and were dissatisfied with the MTF would join Standard/Extra. Those without such a policy would enroll in Prime.

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12. Note that we have implicitly assumed that retirees would have to adhere to other rules dictating when they would be eligible for any benefit. In other words, they can't leave the system and years later try to rejoin it. Under FEHB, for example, federal civilian employees who retire can opt for FEHB then, but if they don't sign up, they lose eligibility.

13. Given the two options and three beneficiary groups, both in and out of catchment, providing the complete description of all models or rules (even in an appendix) would result in excessive detail. We will be happy to provide any interested readers with the complete sets of models or rules that we used.



Another variable that we used to project enrollment for current ADFM Standard/Extra users was how they rated it. The notion here is that if they gave it a high enough rating (at least a 6 on a 10-point scale, with 10 the highest), they would be willing to enroll in it. But, those who rated it poorly would not and would join Prime.

In this way, we developed our set of rules for all of the categories we described earlier. Based on our assumptions, only those with other insurance, including FEHB, might leave the system.<sup>14</sup> The others would either choose Prime or Standard/Extra. The model, or set of rules, we assume simply suggests the circumstances under which they decide to do so.

### **Retirees**

Analogously, we developed projections for retirees, but both those under and over 65 would have to pay for Prime or Standard/Extra. Even with the enrollment fees, the plans still represent “good” deals from the purely monetary point of view, especially for the over-65 group. Almost any insurance they have, other than Medicare, would surely cost them more than even the \$650 per person for Standard/Extra (exceptions being employer-provided plans in which their share is less than the cost of Prime or Standard/Extra or Medicare HMO plans).

The rules were designed to take note of the differences between the two retiree groups as well as their differences from ADFMs. Members of the 65+ group are large consumers of health care, although they do have Medicare to help defray some of the costs. In fact, we’ve assumed that those currently in Medicare HMOs, which usually pay most if not all health care costs, would all stay with them.

One important question is the role of Medicare in defraying some of the costs of other programs, as under Medicare subvention. Having Medicare be a first payor would have a huge effect on the costs of the

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14. We did not want to assume that any DOD beneficiaries would ever buy insurance or take advantage of employer-provided insurance if there’s no evidence that they do so now. For ADFMs, even if they decide not to enroll in Prime, they can always rely on Standard/Extra.

program. We've assumed it wouldn't affect what the beneficiaries themselves plan on doing (as we've designed the rules), but clearly it affects the costs of the program and therefore feasibility to DOD. We'll discuss this and the costs in a later section.

The rules we designed for both groups were somewhat similar to those for ADFMs. We should note one difference, however. Most family members live in catchment and, therefore, have relatively easy access to Prime. We recognize that, for those active duty and their family members who live out of catchment, access to the MTFs may well be limited. But, the numbers are fairly small and, for purposes of this analysis, we assumed that it wouldn't really be an issue. In other words, we used the same rules both in and out catchment.

Compared with ADFMs, a greater percentage of retirees live out of catchment. Even with civilian networks, they would probably have more trouble joining Prime. We didn't know exactly how to quantify how many fewer out-of-catchment retirees would join Prime, so we made a simple assumption. With the exception of the group that said it would enroll (and presumably had some knowledge that it would be possible), we assumed all others would be only half as likely to join Prime as those residing in catchment.

## **Rules for projecting enrollment in option 3**

### **Design of the FEHB option**

The last option represents a major change for the DHP. Instead of offering an enrollment-based Standard/Extra option, beneficiaries would be offered FEHBP. In other words, the only alternatives open to beneficiaries would be Prime or participation in FEHBP. Would there be any differences from the way the program works for current federal civilians or retirees? The simple answer is no. We assume that the choice of plans and cost-sharing arrangements would be the same as today. Depending on the location, there could be several alternative health care plans from which to choose, with the government paying no more than 75 percent of the total premium. DOD beneficiaries have characteristics similar to those of the current FEHB beneficiaries, and, despite the recent experience of the FEHBP demonstration, we wouldn't expect their costs to be that different.

Yet, before we turn to our discussion of the rules, we need to say something about ADFMs. As with option 2, we realized that any option would be politically feasible only if family member costs were held to a minimum. Therefore, we're assuming that DOD would pay the entire bill. Does that mean that any and all options would be open to them? Frankly, without any constraints, the system would undoubtedly cost too much. It may be too costly even with constraints.

Nonetheless, to keep the costs within some sort of bounds, we've implicitly assumed that DOD would pay up to a "blended" premium for some combination of HMO and a Blue Cross/Blue Shield standard option. The beneficiary may want to purchase a "better" plan, but he or she would have to pay the difference. How much would it cost? Given the cost of an individual-only policy in 2000 and using Kaiser-Permanente of mid-Atlantic to represent a typical HMO, the beneficiary would pay about \$611 per year and DOD would pay about \$1,729. A popular alternative is the standard option Blue Cross/Blue Shield plan that would cost the beneficiary \$781 and DOD \$2,050, respectively. Thus, we'll assume the costs to DOD would run somewhere between about \$2,400 and \$2,800 and the implicit "value" to the beneficiary (for comparison purposes) would be about \$700 for an individual plan or slightly above the Standard/Extra cost we assumed under option 2.

### **Summary of the rules**

Let's turn back to the rules we've set up here for the program. For ADFMs, only a few would not take the offer of either Prime or FEHB, and that depends on whether they have other insurance. For the others, we assumed that those who use the MTFs and were satisfied would tend to stay with Prime. Those with little health care utilization, or who weren't satisfied with the MTFs, or who already used civilian sources for care would sign up for the FEHB program.

For the under-65 retirees, the rules were fairly similar to what we assumed under Standard/Extra, although most FEHBP plans, especially the FFS plans that are usually chosen by FEHB retirees, would cost a little more. The only other factor that would lead to significant differences would be their current experience with their plan, including Standard or Extra. With few exceptions, DOD beneficiaries have

little experience with FEHB. Furthermore, one of the advantages of FEHB is that, if one is unhappy with the chosen plan, others can usually be substituted, including (in our scenario) Prime. With Standard/Extra, there are no other options except for Prime.

For the older retirees, we had some experience predicting how many would sign up for FEHB, having done so in [4]. Yet, some factors have changed since we did that work. First, our earlier analysis did not assume that Prime would be offered as an option; it is only one of the current FEHB plans open to federal workers and retirees. Second, premium prices under FEHBP have gone up fairly sharply since we last examined them, although, on a relative basis, the differences (at least in civilian health care) are probably small. That is especially true, given that we've set the enrollment fees for Prime and Standard/Extra at the low end of the current FEHB schedule. Third, and as we discussed before, the questions in the survey are somewhat different. We can't tell with any precision which beneficiaries have employer-provided coverage, although we've created separate groups for those who are likely to have an employer-provided plan from those who purchase a Medigap plan, which in most cases would be self-purchased.

Given these factors, we assume that most of those with supplemental insurance would sign up for Prime or FEHB, depending on their use and satisfaction with the MTF. Those who are unhappy with their current plan would also divide themselves between Prime and the FEHB plans. A larger proportion of those with only primary insurance stay with what they have, mainly because we assume that most employer-provided plans fall into this category. The one group that we've created in which the beneficiaries have no apparent coverage is the category we refer to as other. Those with no health care costs don't enroll; that means they would rely on Medicare alone. Those satisfied with the MTF would enroll in Prime, but those who are dissatisfied would choose an FEHB plan. Those beneficiaries in the other category who rely on civilian sources were assumed to split their new coverage: a small proportion would choose FEHB and a somewhat higher percentage of those dissatisfied with their civilian care would choose Prime. But, overall, the majority of civilian users would not enroll and would rely on Medicare alone.

## Results

We've just discussed the procedures and rules that we used to project enrollment. In this section, we will show how our assumed changes would affect the system, in terms of

- The beneficiary population projected to use it after the changes have taken place
- The effects on DHP costs
- Potential effects on readiness, based on changes in expected beneficiary populations.

## Baseline

Before we can discuss any implications of the changes, we must start by presenting what the system looks like today. Even here, however, there are numerous factors that must be considered and quantified. One in particular is how many people rely on the system today? Before we can answer that, we need to look at the coverage held by DOD beneficiaries.

### Active duty family members

In making our projections, we began by categorizing beneficiaries into groups based on their health care plan or insurance holdings. Because the surveys we used covered adults only, we determined the numbers in each group using the percentages we derived from the survey and the number of eligible adults from administrative numbers provided by OASD/HA. In most cases, the surveys were filled in by beneficiaries in early 1999, but the counts of eligibles and users were based on information in August 1999. Later, in the sections on cost and readiness, we will extrapolate to cover all beneficiaries, both adults and children.

Table 7 presents the number of eligible beneficiaries in each of our groups for ADFMs. The total number of adult family members is about 780,000. The survey implies that about 68 percent of all in-catchment ADFMs and about 48 percent of the out-of-catchment population were enrolled in Prime. About 90,000 ADFMs, or about 12 percent, relied on Standard or Extra. Only about 65,000 have other insurance, including FEHB (a fairly small number, particularly out of catchment). After Prime, most ADFMs are in the category we've referred to as the other group. There are a total of about 154,000 in this group, or about 20 percent of the ADFMs. Most of this group probably relies on space-available care when they require health care.

Table 7. Adult ADFMs, by plan type (in thousands)

	In catchment	Out of catchment	Total
Prime enrollees	366.4	116.9	483.3
Primary insurance holders	32.5	29.6	62.1
FEHB holders	2.7	0.7	3.4
Standard users	24.2	29.7	53.9
Extra users	10.3	16.4	26.7
Other	103.3	50.8	154.1
Total	539.4	244.1	783.5

All of the non-Prime groups contain beneficiaries who at times go to MTFs for space-available care. Because we want to compare the system before and after we impose mandatory enrollment, we need an estimate of how many rely on the MTFs today (which would include those Prime users who use the MTFs). Based on OASD estimates of DHP users, we know the total number who use some combination of care at MTFs or through Standard/Extra; what we don't know is how many fall in each category.<sup>15</sup>

15. Although we believe that there would be cost implications from changes in Prime versus the managed care support contracts, we don't believe that at this time we can disentangle these costs. We will instead use the costs of the entire DHP per person to determine the implications. Nonetheless, for readiness implications, we must determine how many will use each part of the system.

Table 8 presents the percentage of each group that fell into our source-of-care categories. Here, we've combined two of the categories that we used in our models to project enrollment, namely, the satisfied and dissatisfied MTF users. We now merge them into the single MTF category. What's important here is not user satisfaction—only that they received the care at the MTF.

Table 8. ADFM sources of care (percentages)

	In catchment			Out of catchment		
	No health care	MTF	Civilian	No health care	MTF	Civilian
Prime enrollees	2.3	84.0	13.7	1.9	46.7	51.4
Primary insurance holders	2.2	19.6	78.3	5.6	8.3	86.1
FEHB holders	5.0	12.1	82.9	0.0	46.0	54.0
Standard users	0.0	14.2	85.8	0.0	14.2	85.8
Extra users	0.0	14.0	86.0	0.0	5.1	94.9
Other	2.8	76.7	20.5	6.3	38.1	55.6

To estimate the number of civilian Prime and Standard/Extra users, we propose multiplying the percentages of the users who *rely* on civilian sources for care by the number of beneficiaries who fall into each category. This procedure is fairly clear for Standard and Extra users. Any care they receive from civilian providers or facilities is a potential liability for DOD and does not involve active duty providers. Therefore, we will approximate the number of Standard/Extra users who don't use the MTFs by multiplying their respective civilian source of care percentage by the number of beneficiaries who are users.

We do need, however, to consider Prime beneficiaries who use the civilian network. The network is particularly important for beneficiaries who live out of catchment. But, do they receive some of their care—most likely specialty care—at the MTFs? Clearly, many do, but how much? As a first approximation, we will assume that the percentage of Prime enrollees who *usually* go to civilian (military) facilities for care can be used to proxy the percentage of enrollees using civilian (military) facilities.

To be more specific, the derivation takes the appropriate row in table 8 that lists the source of care for those who were enrolled in Prime and combines that value with the corresponding values shown in table 7. For example, using the appropriate values from each table implies that about 50,000 in-catchment ADFMs (the product of 366,000 and .137) and about 60,000 out-of-catchment ADFMs (the product of .514 and 117,000) relied on civilian care under Prime. In similar fashion, we calculated that there would be almost 29,000 users of Standard/Extra in catchment and about 41,000 users out of catchment.

Again, why are these numbers important? The reason is simply to provide a starting point for where the system is today. Furthermore, given the number of total users and estimates of (1) those in Prime who usually go to MTFs, (2) those in Prime who usually see a network provider, and (3) those who usually rely on TRICARE Standard/Extra, we can then estimate the number of space-available users as the residual.

The calculation begins with the total user value of 751,611 ADFM users (both in- and out-of-catchment) and then subtracts the 110,000 civilian Prime users and the 70,000 Standard/Extra users to derive an estimate of about 571,000 space-available users. This estimate may be imprecise, but our estimate of today's cost won't really depend on it. For that, we'll simply take the count of total users (and derived by other means from OASD) for that beneficiary group and multiply the value by its appropriate cost per user.

The next question is, can we be sure that assuming those who rely on a specific source of care (which really means the survey respondent answered that they usually used that source for care) is a good proxy for a *full-time equivalent* user? Given the system today and the lack of truly accurate health care utilization data that show how much Prime enrollees use military versus civilian facilities, there is no precise answer to this question. For purposes of this analysis, we decided that the questions from the survey asking about the beneficiaries' usual source of care were adequate. We can, however, suggest that another method might be to use questions from the survey that ask the beneficiaries about their use of health care services. For example, we created each beneficiary's *utilization weights* based on his or her number of outpatient visits, the number of inpatient days (where each day



counts as 10 visits, just to emphasize the relative importance of a hospital stay), and the visits to an emergency room (where each visit counts as two outpatient visits). We constructed these simple weights to represent a beneficiary's use of MTFs, their use of civilian care paid by TRICARE, and their use of other civilian care (private or government funded). The three weights sum to 1 and provide a relative use of care within and outside the DHP.

There were some differences for the resulting estimates of space-available and Standard/Extra ADFMs when we compared these numbers to our measure based on the beneficiary's usual source of care. However, the final calculation of space-available care was very similar. We did find that there were larger differences for the under-65 retiree.<sup>16</sup> In particular, the utilization measure indicated that some of the civilian care received by both ADFMs and retirees whom we characterize as using Standard or Extra also receive a not insignificant amount of care (i.e., anywhere from a few to several percent) from non-TRICARE civilian sources (with the larger values for retirees). Thus, we will tend to overestimate the number of Standard/Extra users in the baseline.

It's not clear which is the better measure for purposes of determining the various categories of users. With refinement, the utilization measures might actually turn out to be superior. We suggest, however, that further study would be needed to ensure that they would be. Our purpose was not to keep refining all of the values, but to provide some estimates of what's happening today and what might happen tomorrow under enrollment. For now, we continue to present our estimates of Prime civilian, TRICARE Standard/Extra, and space-available care based on our original measure and leave alternative measures, such as those based on self-reported utilization, to the future. We turn next to our discussion of the under-65 retiree.

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16. There is really no analogous problem of estimating space-available care for the Medicare-eligible retiree (at least if one accepts the Health Affairs estimates) because they can enroll in very limited numbers in Prime or use space-available care.

## Retirees under 65

Table 9 presents the various groups for the younger retired population. The specific groups are the same as for ADFMs, but the numbers and percentages tend to be different. In 1999, there were a total of about 2.5 million eligible retirees under 65, of which about one-quarter had enrolled in Prime. About 1 million had some form of primary insurance, and close to 400,000 relied on either Standard or Extra or fell into our other category.

Table 9. Retirees under 65, by plan type (in thousands)

	In catchment	Out of catchment	Total
Prime enrollees	398.7	225.9	624.6
Primary insurance holders	412.5	602.5	1,015.0
FEHB holders	54.1	42.7	96.8
Standard users	83.0	205.0	288.0
Extra users	39.2	70.3	109.5
Other	161.0	229.0	389.9
Total	1,148.4	1,375.4	2,523.8

Table 10 shows where retirees received care. It's fairly clear that these beneficiaries tend to receive more of their care through civilian sources. We calculate that almost 270,000 Prime users rely on civilian sources and about 377,000 rely on TRICARE Standard/Extra. Out of a total user population of more than 1.5 million, subtracting the number of Prime civilian users and Standard/Extra users implies that the number of MTF users is just under 912,000.

Table 10. Retirees under 65 sources of care (percentages)

	In catchment			Out of catchment		
	No health care	MTF	Civilian	No health care	MTF	Civilian
Prime enrollees	1.7	82.0	26.4	2.4	25.8	71.8
Primary insurance holders	2.2	8.6	89.1	2.5	1.8	95.7
FEHB holders	0.2	13.5	86.3	0.0	13.5	86.5
Standard users	0.0	9.6	90.4	0.0	2.8	97.2
Extra users	0.0	14.9	85.1	0.0	2.1	97.9
Other	4.9	57.0	38.0	8.8	19.2	72.0

## Retirees 65 and older

Medicare-eligibles make up the last beneficiary category. As we indicated earlier, with very few exceptions, they are not eligible for Standard or Extra, but we did create two separate insurance groups, as well as coverage by Medicare-risk HMOs.

Table 11 presents the numbers of these beneficiaries who fall within each of the groups. Very few of the Medicare-eligible beneficiaries were enrolled in Prime because of the limitations of the Senior Prime program.<sup>17</sup> Almost two-thirds of the beneficiaries had a supplemental (i.e., Medigap) plan and another 6 percent had another form of primary insurance, very likely through an employer. More than 13 percent were in Medicare HMOs, and about 10 percent fell in the other category which, for the Medicare-eligibles, really means they relied on Medicare and/or space-available care at MTFs.

Table 11. Retirees 65 and older, by plan type (in thousands)

	In catchment	Out of catchment	Total
Prime enrollees	25.0	13.3	38.3
Supplemental insurance holders	320.1	564.7	884.8
Primary insurance only	34.9	49.4	84.3
FEHB	42.7	34.8	77.5
Medicare HMO	75.0	114.5	189.5
Other	53.4	88.0	141.4
Total	551.1	864.7	1,415.8

Because they weren't eligible for Standard/Extra, it becomes straightforward to count the number of FTE MTF users for this group. All users rely on the MTF and their number totals about 343,650. That

17. Even these numbers, particularly out of catchment, seem high. As we indicated earlier, many of the 65+ beneficiaries answer on the survey that they have enrolled, but administrative records show far fewer. One possible explanation is that local MTFs *empanel* these beneficiaries to provide them with a source of care; from the point of view of the beneficiaries, they are enrolled.

means that about one-quarter of the Medicare-eligible population currently relies on the direct care system on a space-available basis.

## Quantifying the changes after enrollment

We'll begin by focusing on the number of beneficiaries who either enroll or leave the system under each of the proposed options. Once we estimate how the numbers using the system change, we can then discuss the effects on cost and readiness.

### Expected enrollment under option 1

Table 12 shows our first set of projections, which captures how the system would change under option 1. Although we ran the model separately for those retirees under 65 both in and out of catchment, we've aggregated these two sets of values to show the results for all such retirees. The table shows that the number of Prime beneficiaries would increase substantially, by more than 380,000. Prime enrollees would rise from about one-quarter of all young retirees to almost 40 percent. The total number using Standard would increase substantially as well, although this probably overstates its appeal. The number of Standard users has almost doubled, but much of that probably comes from individuals who formerly were in the *other* group. This probably means that when they required care, they used the MTF on a space-available basis. Under option 1, that is no longer possible, so they either join Prime or they don't enroll, but plan on using Standard. We project that only a relative few would choose Extra, given that Standard seems like a lower cost substitute.

Table 12. Option 1 enrollment, by plan type (in thousands)

Group	Current	After	Difference
Prime enrollees	624.6	1,005.3	380.7
Primary insurance holders	1,015.0	864.7	-150.3
FEHB holders	96.8	94.2	-1.4
Standard users	288.0	525.0	237.0
Extra users	109.5	34.6	-74.9
Other	389.9	0.0	-389.9

Table 13 presents the same results, only now we show how we would expect their use of the system and MTF would change under option 1. Both Prime enrollment and Standard show an increase. Prime has increased, but it's important to determine whether DOD has more or fewer total beneficiaries relying on the system and whether more or fewer rely on the MTFs for their care. The first question bears important implications for DOD costs and the second question for military health care readiness.

Table 13. System and MTF use under option 1 (in thousands)

Group	Retirees under 65	
	Current	After
Prime		
MTF <sup>a</sup>	357.3	669.5
Civilian network	267.3	335.7
Space-available	554.4	0
Standard	376.5	525.0
Extra		34.6
<b>Total MTF use</b>	<b>911.7</b>	<b>669.5</b>
<b>Total system use</b>	<b>1,555.5</b>	<b>1,564.9</b>

a. The numbers we report for the MTF include those who reported no health care use.

The table shows the breakout after the changes have occurred, but we need to explain how we derived the values. We began by calculating the Prime enrollees who use the MTF and those who use the civilian network. We assumed that all in-catchment Prime use would go to the MTF. Might that be too strong an assumption? Perhaps, but it is important for the system to recapture as many enrollees as possible, especially when total MTF use is predicted to decline. As for the out-of-catchment values, we realize the difficulty in recapturing workload from individuals who just live too far from military facilities. Therefore, we used the percentage of civilian use today to project use after option 2 has been implemented. Even here, it's important to recapture as much as possible.

Having calculated the two components of Prime, we then calculate space-available care as the "residual" value by taking the total number

of users less Prime less the civilian portion of Standard/Extra. Total system use includes all Prime enrollees—at MTFs or civilian networks—space-available care, and Standard/Extra.

## **Expected enrollment under option 2**

Option 1, which we just described, represents a relatively small change in the system—only the young retiree was affected, only some must enroll, and the enrollment fee changes were fairly modest. Perhaps the biggest change was associated in eliminating space-available care for this group.

Option 2 assumes many more changes. Here we'll present the results in two parts. First, we'll show how each beneficiary category was affected by the assumed changes, and then we'll present the totals for the entire population. Our primary comparison will be to show changes in the number of beneficiaries who use the system—either through the direct care system or under the managed care support contract—and changes in the number who rely on the MTF.

### **Projected changes under option 2**

Table 14 presents the before and after changes for the three beneficiary groups. ADFM enrollment in Prime increases by about 100,000 and enrollment of those relying on the combined Standard/Extra increases by about 70,000. The other group experiences the largest drop and, in fact, falls to 0. Why? Option 2 assumes universal enrollment, but DOD would waive the beneficiaries' enrollment fees for Prime or Standard/Extra. We felt it was reasonable that in time everyone in this group would sign up for something.

Next, we turn to the under-65 retirees. Prime enrollment increases by almost 400,000, but Standard/Extra decreases by about 23,000. Of course, this is the new more costly Standard/Extra and it's not unreasonable that some who used it before would not enroll. The rules we set up allow those who weren't happy with it to drop it, most likely for Prime if they didn't have other insurance. Other beneficiaries as well could join Standard/Extra, based on assumptions underlying their decision process. In general, Standard/Extra is still a fairly good plan, given that it resembles a managed FFS at a good price. It seems clear

that many, if not most, of the other category must have enrolled in Prime. The reason that anybody is left is because of those beneficiaries with no health care use who we assumed would probably opt to remain uninsured.

Table 14. Option 2 enrollment, all beneficiary categories (in thousands)

Group	ADFM		Retirees < 65		Retirees 65+	
	Current	After	Current	After	Current	After
Prime enrollees	483.3	584.3	624.6	1,021.1	38.3	193.3
Supplemental ins.					884.8	52.1
Primary ins.	62.1	46.9	1,015.0	1,004.0	84.3	50.3
FEHB	3.4	2.9	96.8	96.5	77.5	52.7
Standard users <sup>a</sup>	53.9	149.4	288.0	375.8	0.0	815.3
Extra users	26.7	0.0	109.5	0.0	0.0	0.0
Medicare HMO					189.5	189.5
Other	154.5	0.0	389.9	26.1	141.4	62.3

a. After option 2 has been implemented, we combine the Standard and Extra users into the single Standard category.

Medicare-eligibles make up the final group. As we've indicated, this group typically faces much higher health care costs and many do not want to depend on Medicare alone for paying bills. Almost 1.2 million of the more than 1.4 million have some sort of Medicare supplement, counting not just Medigap policies, but other primary policies, or participation in a Medicare HMO. If this group were offered Prime and Standard/Extra, we project an increase of about 155,000 in Prime and that more than 815,000 would take Standard/Extra.

Why wouldn't more take Prime? Without going through all of the calculations, the simple answer is that, with so few in Prime today, the majority of those who use the MTFs do so on a space-available basis. Our rules generally allow for Prime enrollment when the beneficiaries indicate they were satisfied with the care they received at the MTFs. If, on the other hand, they were dissatisfied or usually went to civilian facilities for their care, our rules would generally have them choose the Standard/Extra option. We realize that those beneficiaries using the civilian sector for care may really want to get into the

MTFs, but we had no way of determining that this was the case. If they were used to civilian care, we assumed they would stay with it.

### The effects on system and MTF use under option 2

Table 15 presents how the use of the system and MTFs change after option 2 has been implemented. After aggregating across the three beneficiary categories, the results show that the projected number of beneficiaries relying on the DHP will go up, from 2.651 million (adult) users to 3.139 million users, but the increase is entirely the result of the increase in the Medicare-eligible population of about of 665,000. The ADFM and young retiree population actually falls slightly.

Table 15. System and MTF use under option 2 (in thousands)

Group	ADFM		Retirees < 65		Retirees 65+	
	Current	After	Current	After	Current	After
Prime						
MTF <sup>a</sup>	372.9	506.0	357.3	692.6	38.4	193.3
Civilian network	110.4	78.3	267.3	328.5	0.0	0.0
Space-available	198.4	0.0	554.4	0.0	305.3	0.0
Standard/Extra	70.0	149.4	376.5	375.8	0.0	815.3
<b>Total MTF use</b>	<b>571.3</b>	<b>506.0</b>	<b>911.7</b>	<b>692.6</b>	<b>343.7</b>	<b>193.3</b>
<b>Total system use</b>	<b>751.7</b>	<b>733.7</b>	<b>1,555.5</b>	<b>1,396.9</b>	<b>343.7</b>	<b>1,008.6</b>

a. The numbers we report for the MTF include those who reported no health care use.

There's a larger decrease in the number of beneficiaries using the MTF, however. According to our calculations, all three beneficiary groups experience a decline, with the younger retirees experiencing the most, almost 220,000 fewer FTE users. In total, the decline is almost 435,000 users, or about 24 percent when compared to the current user population in the system. Also, we've assumed that all of the Medicare-eligibles who enroll in Prime go to the MTFs. Because most (if not all) came from those who used to go space-available, we assumed they would continue to enroll in Prime there (plus, the MTFs need to keep as many as possible enrolled at the MTFs).

Despite what may appear to be a large decline, there are a few factors that would tend to lessen the effect. First, we've already discussed the difficulties of determining who uses the system today. The method for



determining FTE users among those who go to MTFs on a space-available basis may overstate the use of resources required for care. Retirees who only use the MTF for their prescription drug purchases would not provide the workload for surgeons who need to keep their skills up to date. Second, we haven't yet added a large group of users who would be unaffected by any of these potential options, namely, the active duty. There are more than 1.3 million active duty personnel; assuming they are all MTF users, the actual decline in MTF use falls by only 14 percent.

### **Expected enrollment under option 3**

The third option is similar to the second, but now FEHB replaces Standard/Extra. The role of the managed care support contractor would certainly be reduced, although we would expect the DHP would still require contractor help, at least for providing primary care for Prime enrollees. Nonetheless, this option would entail the greatest change compared to today.

Table 16 presents the before and after results for plan use for this case. The results are fairly similar to the previous case mainly because, as we've said, Standard/Extra is similar to many of the plans under FEHB. We project that relatively more would take FEHB even though it may cost a little more for some of the plans. But, although we introduced a price effect into our rules to account for these kinds of changes, probably the stronger effect was from beneficiaries satisfaction, or lack thereof, with Standard/Extra. One key advantage of FEHB is the wide variety of plans that we assumed were open to beneficiaries. If claims processing or other factors unique to the plan are found wanting, the beneficiary can often switch to another plan.

Our rules guiding choices indicate that more of the Medicare-eligible beneficiary population would take FEHB, when compared to Standard/Extra, and slightly fewer would enroll in Prime. Few have any experiences with either FEHB or Standard/Extra. Could we really model their preferences for one over the other? We wouldn't claim that we could and perhaps slightly more would enroll in Prime than we projected. But, we didn't try to "tinker" too much to get reasonable results. We created the model to be flexible so that alternative assumptions could be tried to gauge how sensitive the results would

be to any underlying assumptions. What we believe is most important is that our results imply that the DHP would attract about 68 percent additional Medicare-eligibles into the system, either through enrollment in Prime or FEHB. This result is very close to our prediction of a 67-percent rate for FEHB alone in [4].

Table 16. Option 3 enrollment, all beneficiary categories (in thousands)

Group	ADFM		Retirees < 65		Retirees 65+	
	Current	After	Current	After	Current	After
Prime enrollees	483.3	548,281	624.6	907.2	38.3	202.2
Supplemental ins.					884.8	32.5
Primary ins.	62.1	46.9	1,015.0	1,004.3	84.3	50.3
FEHB	3.4	188.0	96.8	586.1	77.5	878.7
Standard users	53.9	0.0	288.0	0.0	0.0	0.0
Extra users	26.7	0.0	109.5	0.0	0.0	0.0
Medicare HMO					189.5	189.5
Other	154.5	0.0	389.9	26.1	141.4	62.3

Table 17 presents the effects on the system and MTF use after full implementation of option 3. Similar to the results for option 2, the Medicare-eligibles more than outweigh the slight decline in total system users. There is also a slightly greater decline in MTF use, with the percentage falling by about 16 percent, after including the active duty population.

Table 17. Option 3 system and MTF use (in thousands)

Group	ADFM		Retirees < 65		Retirees 65+	
	Current	After	Current	After	Current	After
Prime						
MTF <sup>a</sup>	372.9	480.7	357.3	637.1	38.4	202.2
Civilian network	110.4	68.0	267.3	270.1	0.0	0.0
Space-available	198.4	0.0	554.4	0.0	305.3	0.0
FEHB <sup>b</sup>	0.0	188.0	0.0	586.1	0.0	878.7
<b>Total MTF use</b>	<b>571.3</b>	<b>480.7</b>	<b>911.7</b>	<b>637.1</b>	<b>343.7</b>	<b>202.2</b>
<b>Total system use</b>	<b>751.7</b>	<b>736.7</b>	<b>1,555.5</b>	<b>1,493.3</b>	<b>342.7</b>	<b>1,080.9</b>

- a. The numbers we report for the MTF include those who reported no health care use.  
b. The FEHB numbers before the change are set to 0 because DOD was not paying for it.

## Effects on cost

### Factors influencing cost calculations

Having projected the changes in the beneficiaries' use of the system under each option, we now turn to the implications for cost and readiness. We'll begin with the costs, not only those that DOD must pay, but the enrollment fees paid by the beneficiaries to participate in the plan.

We had to consider a number of factors before we could perform the required cost calculations. A short list follows; we'll expand on each below:

- Adding back children into the user counts
- Determining how many individual and family plans would be selected
- Determining the appropriate costs, both within the system—MTF and TRICARE Standard/Extra—and outside—including Medicare and FEHB premiums.

Adding back the dependent children is important because they, too, are eligible for care and add to the population and costs associated with the system. Remember that our projections pertain only to adults because we based the projections on the DOD Survey of adults. The decision to join the various plans or options will be made by the adults, but we still need to calculate all people who might receive health care services. We've taken the simplest route, which means we take the ratio of the entire population, adults and children, to the adult population, for either eligibles or users, depending on which was appropriate (the ratios are very close—about 2.5 for ADFM and about 1.2 for retirees under 65).

It was a little more complicated to determine how many individual and family plans would be chosen. This can be important because not all users would require an individual plan. That would greatly overstate the costs of the plan, especially for the active duty family members. In our previous work [4], we had used the DOD population system, now the Managed Care Forecasting and Analysis System

(MCFAS), to approximate the number of individual plans, based on the numbers of retirees, dependents of retirees, and survivors. One fact that simplified the calculation for this group was the lack of any dependent children.

Active duty family members and the younger retirees, however, often have at least one dependent child. For these two groups, we used information from the Defense Manpower Data Center (DMDC), September 1997, that showed the marital and family status for active duty personnel, by paygrade, both officer and enlisted. To determine which ADFMs would likely take an individual or family plan, we used the percentage of active duty who fell in the married/no-children category across all paygrades. That percentage was about 14 percent, which when applied to the ADFM population would give us the approximate percentage of dependent spouses without any children. Because their spouses are active duty and covered automatically under Prime, these family members would be candidates for individual plans. We assumed that all of the other adults would then take a family plan because of their dependent children.

For retirees under 65, we had to make an alternative assumption. One possibility was to rely on MCFAS, use a similar procedure to what we had done for the Medicare-eligible population, but then remove all dependent children. To simplify matters, we used the DMDC information, but relied on the percentage of either single or joint service couples without children for a few of the more senior active duty groups, such as those enlisted E-5 and above and officers O-4 and above.

Table 18 shows the percentages we used for the three beneficiary categories. The percentages of individual plans are close for the ADFMs and young retirees, around 14 or 15 percent, and about 45 percent for the older retirees.

Table 18. Percentage of adults by plan type

	Individual	Family
ADFM	14	86
Retirees under 65	15	85
Medicare-eligibles	45	55

What's probably most uncertain is the cost of providing care. There are several reasons for this. First, we've already alluded to DOD's not knowing exactly how many people use the system. Second, it's difficult to ensure that we have captured the total costs for delivering direct patient care, and even more difficult to determine the fixed and marginal costs. We would especially like to know the marginal costs to determine how costs change with "small" changes in population.

In our recent study on the DOD health care benefit, we used information from OASD/HA to estimate that the total cost to DOD of patient care in the United States was about \$11.77 billion. Given the 5.3 million estimated users, we derived a cost per user within the DHP of about \$2,377. That represents the costs of delivering care at the MTFs as well as through TRICARE Standard or Extra. This number remains a reasonable estimate for all beneficiaries, but we project changes in the beneficiary mix and we need to estimate the difference in cost by beneficiary category as well.

In lieu of better data, we use an updated version of the same Health Affairs information. Table 19 shows these estimates, by beneficiary category. For each category, we show the estimated cost per user and then the total cost of care for that group, based on the estimated number of users in that group. Active duty beneficiaries each cost the system slightly less than \$1,400, family members slightly less than \$2,000, and the Medicare-eligibles the most, almost \$4,500. With almost 1.9 million users, the retirees under 65 cost the DHP the most—almost \$5 billion.

Table 19. Costs of health care by beneficiary category, estimates for 2000

Beneficiary category	Cost/user (\$)	Total cost (\$ billions)
Active duty	1,392	1.848
Active duty family member	1,987	3.724
Retiree under 65	2,502	4.704
Medicare-eligible	4,456	1.531

We use these numbers to represent the cost of care in the MTF or for reimbursement through TRICARE Standard/Extra for the ADFMs

and retirees under 65. But, can we use the value shown in the table for the Medicare-eligible population? Let's examine their costs in a bit more detail. The value in the table is based on the current use of services. That's a small amount of Senior Prime and lots of space-available care, including pharmacy-only users who are aggregated up to one FTE.

The questions are, how reasonable are these costs and what should we use when option 2 offers TRICARE Standard/Extra and option 3 offers FEHB to the Medicare-eligible population? Can we project costs derived from mainly the MTF to what it will cost under Standard/Extra or FEHB?

It may be instructive to examine the costs of care for the civilian Medicare-eligible population. From the 1995 Medicare Current Beneficiary Survey (MCBS), we projected that the average cost in 1999 for the non-institutionalized Medicare-eligibles would be about \$6,900 per person. Medicare pays about \$4,000, leaving about \$2,900 in uncovered costs (\$870 for prescription drugs alone). That's why Medicare-eligibles buy supplemental plans—to help pay for the uncovered costs.

These numbers may be high because the DOD population, on average, is probably somewhat younger and healthier than the civilian Medicare-eligible population. Actuaries at the Office of Personnel Management (OPM) who administer the FEHB program for federal civilian employees and retirees told us that, in 1998, the average cost for an individual in an HMO plan was very close to today's projected cost for an ADFM, or about \$1,987. For retirees, not all of whom are yet eligible for Medicare, those who have assigned their Medicare rights to their HMO (which simply means that Medicare becomes the first payor, not the HMO), the average cost was about \$2,366. This is fairly close to the overall average and close to the DOD retiree average. On the other hand, the average for non-Medicare retirees (i.e., those for whom FEHB pays all costs) was close to \$3,500. This number would have been higher had it included only those over 65, not all retirees.

We recognize that there are a lot of different numbers and without the entire claims file from OPM it's difficult to determine with any precision how the costs would differ between retirees under and over

65. We use the OPM values to illustrate the difficulty of determining what the DOD Medicare-eligible would cost under our proposed plans. Is the \$4,500 from the MTF about right or should we assume that Medicare will pay first and DOD would act as a second payor? OPM told us that when beneficiaries assign their Medicare rights to their health care plan, which happens more often for FFS plans than for HMOs, the cost of the Medicare-eligible population is close to the average for the entire population. Their costs run about 3.5 times as high as the average beneficiary, but Medicare pays almost three-quarters of the cost. If that's the case, we would argue that the Medicare-eligibles may be expensive, but not necessarily for DOD. If, however, DOD must pay the entire bill, they could be very expensive, particularly if their cost is closer to \$6,900 than \$4,500.

Nonetheless, we will continue to assume that the cost of a Medicare-eligible, whether within the direct care system or under the expanded Standard/Extra plan would cost \$4,456 per user. Furthermore, we will also assume that if Medicare is the first payor, they will pay about 58 percent of the cost (the same percentage as in the civilian sector) and DOD would pay essentially the rest (the beneficiaries would still face the normal deductibles and copays, but these would amount to no more than a few hundred dollars in out-of-pocket costs at most). We will also, however, calculate the costs assuming that DOD may have to pay the entire bill if Medicare does not pay its share.

As for FEHB, we will also assume that DOD beneficiaries face the same premium costs as current federal civilians and retirees. We see no reason why they should be more expensive. They are somewhat younger than the typical federal retiree over 65 and quite likely at least as healthy. Most have Medicare, parts A and B, which should help defray the costs, because Medicare can become the first payor. But, these are assumptions that may require further analysis at a later date.

## **Determining the cost by option**

### **Option 1**

To determine the costs of option 1, we start with the various categories showing how many received care. Because we don't attempt to disentangle the costs of providing care through Prime, Standard/

Extra, or space-available, changes in cost after implementing option 1 were entirely the result of the change in the number of beneficiaries using the system.

Table 20 shows our projected costs currently and with option 1. As before, we estimate the costs of providing care for the young retirees at about \$4.7 billion, slightly less after adding the current enrollment fees.<sup>18</sup>

Table 20. Costs under option1, retirees under 65 (\$ billions)

	Current	After
Cost of care		
MTF + space-available	2.757	2.025
Network	.808	1.015
Standard/Extra	1.139	1.692
Subtotal	4.704	4.733
Premiums paid by beneficiaries	.144	.156
<b>Net cost to DOD</b>	<b>4.561</b>	<b>4.577</b>

After the implementation of the new plan, the cost of care at the MTFs falls by more than \$700 million, although there is a small increase at the civilian networks. Option 1 no longer allows retirees to receive space-available care so total MTF workload goes down. Other costs do change, however. Because of the enrollment fee, there are very few Extra users. More beneficiaries rely on Standard: there is no premium assumed and any cost savings from Extra are relatively small.

In this and the other cases that follow, we want to reiterate that we've made the important assumption that the estimated cost per user can be used to predict how costs change with changes in population. To the extent that fixed costs prevent any significant downsizing, the costs after any option has been assumed may well be higher. But, this

18. We realized when we were computing our estimates of the current enrollment fees that they may have already been taken into account as part of the cost per user. But, we wanted to be consistent. If new enrollment fees would reduce DOD's cost, we felt that we should reduce the current cost as well.



again reaffirms the need for better cost data. Until a more exhaustive analysis of the DOD health care system's cost structure is available, we believe our estimates remain valid.

## Option 2

Option 2 affects all three beneficiary categories, and we'll begin with the ADFMs and retirees under 65. Table 21 shows our projections of these costs. There have been some reductions in the cost of Prime, particularly in the portion going to the network. Remember that we assumed that, with no space-available care allowed, should MTF workload fall in catchment, Prime enrollees would receive all of their care at the MTFs. Standard/Extra costs rise, but overall the total cost of providing care falls.

Table 21. Costs under option 2, ADFMs and retirees under 65 (\$ billions)

	ADFM		Retirees under 65	
	Current	After	Current	After
Cost of care				
MTF + space-available	2.830	2.507	2.757	2.095
Network	.547	.388	.808	.993
Standard/Extra	.347	.740	1.139	1.136
Subtotal	3.724	3.635	4.704	4.225
Premiums paid by beneficiaries			.144	.695
<b>Net cost to DOD</b>	<b>3.724</b>	<b>3.635</b>	<b>4.561</b>	<b>3.529</b>

There is a more striking decrease in costs for retirees under 65. More than a half million of this group relied on space-available care. Even with the increase in Prime, we projected that the overall MTF workload will fall and so will cost. In addition, the new fee structure leads to a substantial increase in the fees paid to DOD, which rise to almost \$700 million. Thus, MTF workload falls, fees increase, and DHP costs fall.

We present the results for the Medicare-eligibles separately because, as we hope our earlier discussion made clear, there is even more uncertainty associated with the costs of providing care to this group. Table 22 presents our projected costs, under different assumptions concerning the role of Medicare. First, we assume that DOD pays the entire bill for this group and that the bill per user is the \$4,456 shown

in table 19. Under this scenario, costs rise from about \$1.5 billion to almost \$4 billion—a result of the high costs of providing care to so many beneficiaries under Standard/Extra. But, the second scenario assumes that Medicare becomes the first payor and relieves DOD of about 58 percent of the bill. That leaves DOD paying probably less than the 42 percent remaining (i.e., less than 42 percent because of small deductibles and copays that must be paid by beneficiaries). The important point is that the cost of care would fall to about \$1.8 billion from almost \$4 billion. We believe this to be the most likely case, but DOD must determine what role Medicare will play.

Table 22. Costs under option 2, Medicare-eligibles (\$ billions)

	Current	After Case 1 <sup>a</sup>	After Case 2 <sup>b</sup>
Cost of care			
MTF + space-available	1.531	.861	.861
Network			
Standard/Extra		3.633	1.526
Subtotal	1.531	4.494	2.387
Premiums paid by beneficiaries		.607	.607
<b>Net cost to DOD</b>	<b>1.531</b>	<b>3.887</b>	<b>1.780</b>

a. DOD pays the entire bill; no Medicare contribution.

b. Medicare is the first payor; its contributions average about 58 percent of the total bill.

Table 23 summarizes the costs for all beneficiaries under the second option. We show the total over all three groups, with the various cases based on alternative assumptions concerning whether Medicare will pay part of the bill. We've also added a third case, the worst-case scenario. If the cost of providing care is higher than the \$4,456 value we've been using, say closer to the \$6,900 it costs for the average civilian Medicare-eligible, DOD could face as much as an additional \$2.5 billion in costs. It is important to determine whether Medicare will contribute to the care of DOD beneficiaries.

Table 23. Net DOD costs (\$ billions)

	Net cost of care
<b>Current</b>	<b>9.816</b>
After	
Case 1	11.051
<b>Case 2</b>	<b>8.944</b>
"Worst" case <sup>a</sup>	13.50

a. Assumes that the true cost of delivering care to this group is close to civilian average.

### Option 3

The last case substitutes FEHB for TRICARE Standard/Extra. Not only did we have to estimate the cost of providing Prime to DOD enrollees, but we had to estimate the cost of premiums to DOD and its beneficiaries. In this case, as we've already mentioned, when discussing FEHB, we do not assume that premiums will be higher than for current federal civilian workers and retirees. Again, this is important for the projected costs of the DOD Medicare-eligible population. The costs will be similar only if roughly the same proportion of retirees who sign up for FEHB assign their Medicare rights to their insurance plan as do current FEHB Medicare-eligibles.

Table 24 shows our projections of costs for option 3. The most expensive group under FEHB is the ADFMs. Their cost would go up by about \$1.6 billion. As with option 2, we've assumed that they face no premiums as long as they accept the subsidized payment of a blended HMO and Blue Cross/Blue Shield (BC/BS) standard option plan. To determine the cost of such a plan, we assumed that about 30 percent would choose the HMO and 70 percent would choose BC/BS. This mirrors the current split between HMOs and FFS plans among current FEHB enrollees. Retirees must pay their share of the premiums, which we also calculate as a blend, but for retirees, we assumed that only 16 percent would choose the HMO and the rest would choose the FFS plan (again, mirroring current OPM retirees).

Table 24. Costs under option 3, all beneficiary categories (\$ billions)

	ADFM		Retirees under 65		Medicare-eligibles	
	Current	After	Current	After	Current	After
Cost of care						
MTF + space-available	2.830	2.381	2.757	1.927	1.531	.901
Network	.547	.337	.808	.817		
Standard/Extra	.347		1.139			
Subtotal	3.724	2.718	4.704	2.744	1.531	.901
Premiums paid by DOD		2.644		1.391		1.886
Prime premiums paid to DOD			.144	.386		.081
FEHB premiums paid by beneficiaries				.535		.709
<b>Net cost to DOD</b>	<b>3.724</b>	<b>5.362</b>	<b>4.561</b>	<b>3.748</b>	<b>1.531</b>	<b>2.706</b>

Costs actually fall for the under-65 retirees. We projected that many more would enroll in Prime than in the current scenario, but others who had used Standard/Extra or space-available left the system entirely. Also similar to option 2, fees paid for the increase, but most of the cost reduction was from lower enrollment.

The final group is the Medicare-eligible beneficiaries. Fewer also rely on the MTFs when compared to today, but under option 3 (as in option 2) they are enrolled. Their FEHB costs are also high; DOD pays almost \$1.9 billion in premiums, for a net increase in their costs to DOD of almost \$1.2 billion.

Table 25 summarizes the costs for option 3 by presenting the costs aggregated over all beneficiaries. The cost of offering FEHB, together with the other characteristics of the option 3 plan design, would lead to an increase in cost of about \$2 billion. As we saw in the last table, the cost of providing all retirees with the plan is not really the reason for the added costs. About 80 percent is because of the ADFM subsidy.

Table 25. Option 3 net DOD costs (\$ billions)

	Net cost of care
Current	9.816
After	11.816

## Impact on readiness

Our results indicate that the introduction of enrollment as described in options 2 and 3 would lead to a decrease in the number of individuals who would rely on the military's direct care system. This raises concerns about whether this decrease would have an adverse effect on military readiness. The three services would like enough workload within the direct care system to keep those physicians who are needed for wartime care sufficiently busy to enhance their skills.

In this section, we describe the impact of enrollment on the number of beneficiaries relying on the direct care system. Given the projected population, we then generate the numbers of physicians, by specialty, that would be necessary to provide patient care within the direct care system, currently and under options 2 and 3. Finally, we compare these numbers with the numbers of physicians the three services must have in order to maintain military readiness.

### Impact on direct care system reliance

In table 26, we present the numbers of beneficiaries who currently rely on the direct care system and who we project would rely on the direct care system under options 2 and 3. We include beneficiaries living overseas, active duty personnel, active duty family members, and retirees and their dependents and survivors. We include the overseas beneficiaries because we were not able to determine how many of the physicians required for readiness purposes are based overseas. We estimate that about 4.7 million beneficiaries currently rely on the direct care system. If option 2 were adopted, we project that this number would fall by about 12 percent to roughly 4.1 million. If option 3 were adopted, our predictions indicate that it would fall by 15 percent to roughly 4 million. Therefore, the loss of workload from military facilities would be fairly significant.

Table 26. Impact of enrollment on direct care system reliance (in millions)

Beneficiary group	Number of beneficiaries using direct care system		
	Current	Option 2	Option 3
Overseas	.489	.489	.489
Active duty	1.328	1.328	1.328
Active duty family	1.438	1.274	1.210
Retirees under 65	1.102	.837	.770
Retirees 65 and older	.344	.193	.202
Total	4.700	4.121	3.999
Change from current	N/A	- 12%	- 15%

### Converting numbers of patients to numbers of physicians

One way of measuring this loss in workload is to convert the number of patients to the number of different types of physicians this patient base can support. Most managed care organizations have developed methods to determine how many physicians are necessary to treat a given number of patients. One such managed care organization that resembles the direct care system, in the sense that it is a large group model HMO, is the Kaiser Foundation Health Plan.

We should make it clear that we do not assume that the military health care system must staff just as Kaiser would. But, the use of Kaiser's staffing ratios serve as a way of allowing us to compare the required physicians that a well-respected health care organization feels it needs to provide care for a given population. We have used these staffing ratios in earlier studies that looked at the optimal allocation of the Navy's inventory of physicians across its facilities (see [5] as an example). Here, we use staffing ratios that Kaiser has developed to determine the number of physicians the direct care patient base can currently support as well as the number it could support under options 2 and 3.

The staffing ratios, which are measured as number of physicians needed per 100,000 patients, are presented in table 27. We've aggregated some of the categories. For example, we combined general internal medicine physicians and family practice physicians to come up with the primary care category. We've also aggregated many of the

internal medicine (IM) subspecialties, such as cardiologists and gastroenterologists, for the IM specialists category.

Table 27. Kaiser Foundation Health Plan staffing ratios

Type of physician	Staffing ratio (per 100,000 patients)
Primary care	40.25
Pediatrics	18.68
Internal medicine specialists	13.37
General surgeons	5.45
Orthopedic surgeons	5.82
Other surgical specialties	25.82
Anesthesiologists	6.36
Radiologists and pathologists	8.09
Dermatologists	2.94
Neurologists	1.87
Psychiatrists	5.58
Emergency medicine	6.73

The question we were most interested in was whether the population that we project to enroll in Prime at the MTFs would support the number of physicians required for readiness. Once we have the population for all cases and the staffing ratios from Kaiser, it's relatively simple to project what the care requirements would be. The hardest part is determining each services' readiness numbers.

Therefore, we requested from each service a list of their fully trained requirement that is now calculated as part of the DOD Sizing Model. We recognize that we have chosen to focus only on a small part of what's required for medical readiness. There are physicians who are required for training (under what is termed sustainment). We don't include them here. There are other medical specialties, including nurses, dentists, and many others required for readiness, but we couldn't examine them all. Our primary goal in this section was to suggest a method to account for the potential effects on military medical readiness requirements, given such large changes in the system as we've imposed in this analysis.

Table 28 presents the projected patient care physician requirements as well as, in the last column, our calculation for the tri-service readiness requirement. This was derived simply by totaling the three services' individual requirements. The table confirms that the smaller MTF population would reduce the number required for providing patient care. Primary care physician requirements would fall from almost 1,900 to a bit more than 1,600, depending on which option was implemented.

Table 28. Projected requirements based on population and readiness

Type of physician	Current	Option 2	Option 3	Readiness
Primary care	1,892	1,659	1,610	1,355
Pediatrics	878	770	747	216
Internal medicine specialists	628	551	535	119
General surgeons	256	225	233	<b>442</b>
Orthopedic surgeons	274	240	233	<b>277</b>
Other surgical specialties	1,214	1,064	1,032	457
Anesthesiologists	299	262	254	238
Radiologists and pathologists	380	333	324	238
Dermatologists	139	121	118	24
Neurologists	88	77	75	18
Psychiatrists	262	230	223	172
Emergency medicine	316	277	269	<b>337</b>

The important question is whether these requirements that are based on providing peacetime care to a given population, would support the number of physicians required for readiness. The answer is no, at least not for all specialties examined in this analysis. The number of such specialties is small, however. Furthermore, even based on our calculation of the current population, there would not be sufficient numbers of general surgeons and emergency medicine physicians to keep their skills sufficiently high to be ready for an important contingency. The only specialty in which the decrease in population would potentially create a new problem is orthopedic surgery. In all of the other cases but these three, our numbers indicate that options 2 or 3 would not create a significant readiness problem.



## Concluding remarks

In this analysis, we have explored the effects on the DHP if DOD beneficiaries had to enroll in specific options that were offered as part of their health care benefit. Probably the most significant implication of universal enrollment is that space-available care would not be available to anyone who has not enrolled in Prime.

We examined three specific options. Details were provided in the text, but we can briefly summarize them as follows:

- Option 1—affects only retirees under 65, who would have their enrollment fees for Prime reduced, would have to pay an enrollment fee for TRICARE Extra, but could still rely on the no-enrollment, no-fee TRICARE Standard option,
- Option 2—affects all non-active-duty beneficiaries, who would find that they must enroll and pay a fee for Prime, or enroll and pay a somewhat higher fee for TRICARE Standard/Extra if they want to stay in the system,
- Option 3—affects all non-active-duty beneficiaries, who would find that they must enroll and pay a fee for Prime, or sign up for FEHB, the same plan offered to federal civilian employees and retirees.

Although we realize that these three options may cost beneficiaries more and certainly do constrain the choices for care that they have currently, we believe there are many benefits, including:

- Reduced uncertainty surrounding who receives care, which would lead to management efficiencies and the appropriate use of resources
- Increased emphasis of the DHP focusing on increasing the *health* of its beneficiaries.

Our focus has been on developing models that would allow us to project who and how many would enroll in each plan. The models were designed to be fairly easy to run and flexible because there are many potential alternatives to those examined here. The models also allow us to determine how sensitive the results are to changes in underlying assumptions used in making the projections.

Once we projected enrollments for all three options, we turned to estimating the associated costs that DOD and the beneficiaries would have to pay. We broke out the three beneficiary categories separately so that we could determine when the costs were especially large. An important question was whether it was affordable to include the DOD Medicare-eligible population in our proposed options. Indeed, that was one reason for increasing fees for younger retirees—if the costs to DOD were not too high, that might mean that retirees could retain the benefit when they turn 65.

To summarize what we found:

- All options would lead to increases in Prime enrollments, but the overall use of the MTF would fall.
- MTF use would drop because the current system has so many space-available users, who would be forced to choose among several alternatives, including leaving the system.
  - The smallest decrease occurs under option 1, which isn't surprising because it involves the smallest set of changes and affects only the young retirees.
  - The largest decrease occurs under option 3 (and is only slightly larger than option 2). After adding back the active duty, who would not be affected by the plan, the reduction in overall MTF use would be about 16 percent.
- The number of beneficiaries who would take advantage of what's offered, whether under Prime or an alternative (such as FEHB), is either close to or a bit higher than today. This is mostly the result of large numbers of DOD Medicare-eligibles joining the system.

- The current cost of providing care to ADFMs and retirees of all ages today is just under \$10 billion.
  - Option 1 would increase this figure slightly.
  - Option 2 might actually decrease costs, but this assumes that Medicare pays a good part of the care for the Medicare-eligible population.
  - Option 3 would increase costs by about \$2 billion. Most of this increase, however, results from our assumption that DOD would pay much, if not all, of the ADFM premium.

From the outset, we knew that one of the major concerns of policy-makers is how any change to the system could potentially affect the readiness of military providers. Therefore, we examined how changes in MTF enrollments and use would affect the readiness of military physicians. We found:

- Most specialties, even with the reduced population and resulting loss in workload, would have sufficient population to keep their skill levels where they are today.
- Three specialties would have problems—general and orthopedic surgery and emergency medicine. But, according to our calculations, these three might not have enough of a population base even today.
- More work should be done in this area, including focusing on how the changing mix of the population might cause additional problems and how physicians required for training as well as other providers would be affected.

To conclude, we believe that more needs to be done to understand what might happen when the system changes in a major way. Current demonstration projects and surveys provide useful information, but they tell only part of the story. We believe that we've developed a useful set of models and data from which one could explore the effects of changes in the benefit offered to DOD beneficiaries. Nonetheless, this is a complicated area and much of the required data are lacking not only to project the future but to determine what the system looks like today.

## References

- [1] Robert A. Levy, Richard D. Miller, and Pamela S. Brannman. *The DOD Health Care Benefit: How Does It Compare to FEHBP and Other Plans?* May 2000 (CNA Research Memorandum D0001316.A1)
- [2] David A. Kindig. *Purchasing Population Health: Paying for Results*. Ann Arbor, MI: University of Michigan Press, 1997
- [3] Thomas C. Buchmueller and Paul J. Feldstein. "The Effect of Price on Switching Among Health Plans." *Journal of Health Economics* 16, 1997: 231-247
- [4] Robert A. Levy and Richard D. Miller. *Options for Improving Access to Health Care for Retirees*, Sep 1998 (CNA Annotated Briefing 98-60)
- [5] Robert A. Levy. *Allocating the Navy's Wartime Physician Requirements During Peacetime: Methods and Initial Results*, Sep 1997 (CNA Research Memorandum 97-7)

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